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STATE CAPITOL, AT LITTLE ROCK.



# ARKANSAS

— IN —

1892-1893.

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PREPARED FROM DATA OBTAINED FROM THE CENSUS RETURNS  
OF 1890, AND OTHER AUTHORITATIVE SOURCES.

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FOR THE  
WORLD'S COLUMBIAN EXPOSITION.

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## PREFACE.

This book has been divided into two parts, viz :

*First.* The State of Arkansas as a whole.

*Second.* The State treated by sections.

The first part was prepared by Prof. J. H. Shinn, State Superintendent of Public Instruction, and the second by persons whose names are attached to the several articles. It is confidently believed that the whole State has been fairly presented, and that the matter set forth is entirely reliable.

JAMES MITCHELL,

*President Arkansas World's Fair Directory.*

H. L. NORWOOD,

*Secretary.*



# THE STATE.

## POPULATION.

The design of this volume is to present to the world a pen picture of Arkansas as it is educationally, morally, financially and otherwise, together with a view of its resources. Men who seek homes desire to know the truth, and special pains has been taken by the Arkansas World's Fair Directory, to whom was intrusted the task of compiling this book, to have it show the State as it is, and what may be reasonably expected of it under ordinary circumstances. Those who read may trust what is said, and it is confidently believed that every new comer will find greater things in the State itself than can be described or noted in this volume.

The State itself is young, although discovered by De Soto in the sixteenth century and wandered over in turn by the Spaniards and the French for more than two hundred years, it was not until the beginning of the nineteenth century that this region attracted the attention of English and American settlers. Carved out of the Louisiana Purchase, it took a territorial form in 1819, and was admitted to the Union as a State in 1836.

In 1820 there were but 14,255 people within the present limits of the State. The successive decades have noted successive changes, each of which was a marked improvement over the preceding one. Emigrants have always sought the State, and the authentic figures which record their movements show that the regular migration of home seekers towards Arkansas has never been behind the normal movement of population to the other new States. The growth of the State is best exhibited by the following figures :

YEAR.	POPULATION.	YEAR.	POPULATION.
1820.....	14,255	1860.....	435,450
1830.....	30,388	1870.....	484,471
1840.....	97,574	1880.....	802,525
1850.....	209,897	1890.....	1,128,179

From 1820 to 1830 Arkansas outstripped all the States in the Union in increase of population, save Indiana, Illinois and Michigan. From 1830 to 1840 Michigan was the only State that excelled her in population growth. From 1840 to 1850 she kept pace with all save Iowa and Wisconsin. While from 1850 to 1860 she outstripped all the rest save Iowa, California and Texas. The strength of a country's soil and the attractiveness of its climate are best attested by the comparative ratios of those who seek it and remain with it. Judged by this standard, there must have been a remarkable vigor in the soil to place Arkansas so



high in percentage when compared in population growth with the other States. The war was not strong enough to stay the growth and when peace blessed the country with prosperity, Arkansas made the remarkable record of almost doubling her population in the sixth decade of her existence. From 1870 to 1880 the population ran up from 484,471 to 802,525. The steady stream of emigration so regularly maintained through sixty years did not fall back from 1880 to 1890, when the State reached its maximum population of 1,128,179 souls. This increase during the last decade is phenomenal. Not a State in the Union of the same age maintained an increase of population from 1880 to 1890 of 40 per cent, and yet this was the rate of increase for this queen State of Southern growth. Even the Empire State of Texas, with an area of five times that of Arkansas, and younger in years, was beaten in the race.

## INCREASE.

The increase in Texas was 40.44 per cent; while in Arkansas the increase was 40.58 per cent. No State east of the Mississippi, except Florida, approached Arkansas in per centum of increase of population. In fact, she was outstripped by no States save Florida, Minnesota, Colorado, Kansas, Nebraska, Oregon, North and South Dakota, Idaho, Montana, Wyoming and Washington, many of whom are too new for statistical comparisons.

Every year has not only brought a marked increase of population, but as will appear later on, this increase has always been of the thrifty, vigorous kind. The wealth totals will bear out these statements.

The population of both kinds, black and white, is divided as follows:

Whites, 804,658.

Blacks, 309,427.

The entire native population is 1,113,915 against 14,264 foreign born. The whites with native parentage number 780,969, leaving but 23,708 of the native whites with a foreign parentage. The possibilities of a State with such clear blood strains are beyond calculation.

The percentages of increase in native born population from 1880 to 1890 for the south central division of the country are shown below:

STATE.	PER CENT.	STATE.	PER CENT.
Kentucky .....	13.22	Louisiana.....	22.66
Tennessee .....	14.54	Arkansas.....	40.61
Alabama.....	19.59	Texas .....	40.99
Mississippi .....	14.19		

The percentages of increase for the foreign born population in the same division for the same period are as follows:

STATE.	PER CENT.	STATE.	PER CENT.
Kentucky .....	.27	Louisiana.....	8.12
Tennessee.....	19.92	Texas .....	33.45
Alabama.....	51.81	Arkansas.....	37.82
Mississippi.....	13.65		

Showing a greater population movement in favor of Arkansas than of any State in this division excepting Texas.

It has been said that the negroes are not well treated in Arkansas. The best indication of the treatment accorded a race in any country is to be ascertained by a comparison of the movement of that race to or from the section in question.

The increase of colored population in the south central division from 1880 to 1890 was:

STATE.	PER CENT.	STATE.	PER CENT.
Kentucky .....	1.23	Louisiana .....	15.51
Tennessee .....	6.78	Texas .....	24.10
Alabama .....	13.16	Arkansas .....	46.65
Mississippi .....	14.19		

This phenomenal increase of colored people can only be explained on the theory that there is a constant movement of this race from other States to Arkansas; and this constancy of movement negatives the sensational stories of bad treatment. No people will regularly turn their faces to a region where they are not accorded fair and generous treatment. And no State gives the colored people with so lavish a hand as does the maligned State of Arkansas. Other figures in this book attest this statement and like these are incontrovertible.

It has been said that a Northern born man has little chance of success in this region. The figures do not support the assertion. From the very beginning there has been a steady accession of Northern born men to our population, and these men have been among the leaders of every movement for the development of the State. Before the war men born in Massachusetts and Pennsylvania represented the State in both houses of Congress and in nearly every State position. Since the war there has been a large influx of Northern men and these men are among the honored and distinguished citizens of the State and belong to each of the two great parties that divide the country.

Thus thousands upon thousands come to us each year from nearly every one of the older States. They come in greater ratios than to other favored localities. They come bringing their wives and children, their property and their hopes. They come to search for greater happiness and the great percentages of increase favor the inference that they find what they seek. Let us look a little more narrowly into the resources of the State for the reasons which underlie this great percentage of population increase with the hope that they will satisfy a still greater number and continue to turn to us the vigor, valor and virtue of every clime.

## COUNTY POPULATION.

The following gives the population of the State of Arkansas in detail by counties, according to the official count of the returns made under the Eleventh Census, taken as of June 1, 1890. The figures for the same divisions according to the census of 1880 are also given for purposes of comparison.

The population of the State in 1890 was 1,128,179, an increase of 325,654, or 40.58 per cent, since 1880, when a population of 802,525 was returned.

In every county in the State an increase is shown, except in Van Buren, where the decrease is due to a decrease in territory. In Jefferson, Pulaski and Sebastian Counties the largest numerical increases are found. Nineteen counties show increases of more than 50 per cent.

The following summary shows the population of each county according to the censuses of 1890 and 1880, together with the increase in number and per cent during the decade:

## SUMMARY BY COUNTIES.

COUNTIES.	POPULATION.		INCREASE.		COUNTIES.	POPULATION.		INCREASE.	
	1890.	1880.	No.	Per cent.		1890.	1880.	No.	Per cent.
The State.....	1,128,179	802,525	325,654	40.58	Lawrence.....	12,984	8,782	4,202	47.85
Arkansas.....	11,432	8,038	3,394	42.22	Lee.....	18,886	13,288	5,598	42.13
Ashley.....	13,295	10,156	3,139	30.91	Lincoln.....	10,255	9,255	1,000	10.80
Baxter.....	8,527	6,004	2,523	42.02	Little River.....	8,903	6,404	2,499	39.02
Benton.....	27,716	20,328	7,388	36.34	Logan.....	20,774	14,885	5,889	39.56
Boone.....	15,816	12,146	3,670	30.22	Lonoke.....	19,263	12,146	7,117	58.60
Bradley.....	7,972	6,285	1,687	26.84	Madison.....	17,402	11,455	5,947	51.92
Calhoun.....	7,267	5,671	1,596	28.14	Marion.....	10,390	7,907	2,483	31.40
Carroll.....	17,288	13,337	3,951	29.62	Miller.....	14,714	9,919	4,795	48.34
Chicot.....	11,419	10,117	1,302	12.87	Mississippi.....	11,635	7,332	4,303	58.69
Clark.....	20,997	15,771	5,226	33.14	Monroe.....	15,336	9,574	5,762	60.18
Clay.....	12,200	7,213	4,987	69.14	Montgomery.....	7,923	5,729	2,194	38.30
Cleburne.....	7,884	.....	7,884	.....	Nevada.....	14,832	12,959	1,873	14.45
Cleveland.....	11,362	8,370	2,992	35.75	Newton.....	9,950	6,120	3,830	62.58
Columbia.....	19,893	14,090	5,803	41.19	Ouachita.....	17,033	11,758	5,275	44.86
Conway.....	19,459	12,755	6,704	52.56	Perry.....	5,538	3,872	1,666	43.03
Craighead.....	12,025	7,037	4,988	70.88	Phillips.....	25,341	21,262	4,079	19.18
Crawford.....	21,714	14,740	6,974	47.31	Pike.....	8,537	6,345	2,192	34.55
Crittenden.....	13,940	9,415	4,525	48.06	Poinsett.....	4,272	2,192	2,080	94.89
Cross.....	7,693	5,050	2,643	52.34	Polk.....	9,283	5,857	3,426	58.49
Dallas.....	9,296	6,505	2,791	42.91	Pope.....	19,458	14,322	5,136	35.86
Desha.....	10,324	8,973	1,351	15.06	Prairie.....	11,374	8,435	2,939	34.84
Drew.....	17,352	12,231	5,121	41.87	Pulaski.....	47,329	32,616	14,713	45.11
Faulkner.....	18,342	12,786	5,556	43.45	Randolph.....	14,485	11,724	2,761	23.55
Franklin.....	19,934	14,951	4,983	33.33	Saint Francis.....	13,543	8,389	5,154	61.44
Fulton.....	10,984	6,720	4,264	63.45	Saline.....	11,311	8,953	2,358	26.34
Garland.....	15,328	9,023	6,305	69.88	Scott.....	12,635	9,174	3,461	37.73
Grant.....	7,786	6,185	1,601	25.89	Searcy.....	9,664	7,278	2,386	32.78
Greene.....	12,908	7,480	5,428	72.57	Sebastian.....	33,200	19,560	13,640	69.73
Hempstead.....	22,796	19,015	3,781	19.88	Sevier.....	10,072	6,192	3,880	62.66
Hot Spring.....	11,603	7,775	3,828	49.23	Sharp.....	10,418	9,047	1,371	15.15
Howard.....	13,789	9,917	3,872	39.04	Stone.....	7,043	5,089	1,954	38.40
Independence.....	21,961	18,086	3,875	21.43	Union.....	14,977	13,419	1,558	11.61
Izard.....	13,038	10,857	2,181	20.09	Van Buren.....	8,567	9,565	a998	a10.43
Jackson.....	15,179	10,877	4,302	39.55	Washington.....	32,024	23,844	8,180	34.31
Jefferson.....	40,881	22,386	18,495	82.62	White.....	22,946	17,794	5,152	28.95
Johnson.....	16,758	11,565	5,193	44.90	Woodruff.....	14,009	8,646	5,363	62.03
Lafayette.....	7,700	5,730	1,970	34.38	Yell.....	18,015	13,852	4,163	30.05

a Decrease.

## CITY POPULATION.

The population of the thirteen cities and towns having 2,000 or more inhabitants:

CITIES AND TOWNS.	COUNTIES.	POPULATION.		INCREASE.	
		1890.	1880.	No.	Per cent.
Little Rock city.....	Pulaski.....	25,874	13,138	12,736	96.94
Fort Smith city.....	Sebastian.....	11,311	3,099	8,212	264.99
Pine Bluff city.....	Jefferson.....	9,952	3,203	6,749	210.71
Hot Springs city.....	Garland.....	8,086	3,554	4,532	127.52
Helena city.....	Phillips.....	5,189	3,652	1,537	42.09
Eureka Springs city.....	Carroll.....	3,706	3,984	a278	a6.98
Texarkana city (b).....	Miller.....	3,528	1,390	2,138	153.81
Fayetteville city.....	Washington.....	2,942	1,788	1,154	64.54
Camden city.....	Ouachita.....	2,571	1,503	1,068	71.06
Arkadelphia town.....	Clark.....	2,455	1,506	949	63.01
Van Buren city.....	Crawford.....	2,291	1,029	1,262	122.64
Batesville town.....	Independence.....	2,150	1,264	886	70.09
Jonesboro town.....	Craighead.....	2,065	.....	2,065	.....

a Decrease.

b Total for Texarkana city, in Miller County, Ark., and Bowie County, Texas, 6,380.



## COUNTY POPULATION BY COLOR.

STATES, TERRITORIES AND COUNTIES.	AGGREGATE WHITE.		TOTAL COLORED.		STATES, TERRITORIES AND COUNTIES.	AGGREGATE WHITE.		TOTAL COLORED.	
	Males.	Fe- males.	Males.	Fe- males.		Males.	Fe- males.	Males.	Fe- males.
Arkansas .....	4,221	3,678	1,776	1,757	Lee .....	2,596	2,095	7,438	6,757
Ashley .....	3,323	3,104	3,445	3,423	Lincoln .....	1,928	1,856	3,443	3,028
Baxter .....	4,414	4,095	9	9	Little River .....	2,566	2,336	1,963	2,038
Benton .....	13,882	13,740	40	54	Logan .....	10,236	9,410	567	561
Boone .....	7,871	7,852	46	47	Lonoke .....	5,970	5,308	4,176	3,809
Bradley .....	2,574	2,534	1,461	1,403	Madison .....	8,854	8,490	27	31
Calhoun .....	2,397	2,150	1,396	1,324	Marion .....	5,303	5,055	15	17
Carroll .....	8,695	8,510	36	47	Miller .....	4,328	3,819	3,359	3,207
Chicot .....	731	661	5,247	4,780	Mississippi .....	3,089	2,646	3,213	2,688
Clark .....	7,377	6,824	3,385	3,411	Monroe .....	3,275	2,849	4,822	4,390
Clay .....	6,583	5,573	27	17	Montgomery .....	3,903	3,718	148	154
Cleburne .....	4,045	3,787	25	27	Nevada .....	5,412	5,114	2,159	2,147
Cleveland .....	4,263	3,771	1,748	1,580	Newton .....	5,096	4,847	6	1
Columbia .....	6,482	6,098	3,643	3,670	Ouachita .....	4,259	3,817	4,548	4,409
Conway .....	6,059	5,729	3,997	3,674	Perry .....	2,464	2,133	451	490
Craighead .....	6,123	5,383	253	266	Phillips .....	3,076	2,619	10,063	9,583
Crawford .....	10,007	9,403	1,159	1,145	Pike .....	4,115	3,938	235	249
Crittenden .....	1,245	805	6,297	5,593	Poinsett .....	2,057	1,669	315	231
Cross .....	1,621	2,181	1,500	1,391	Polk .....	4,684	4,553	24	22
Dallas .....	3,076	2,950	1,621	1,649	Pope .....	9,253	8,584	846	775
Desha .....	1,160	959	4,377	3,828	Prairie .....	3,750	3,261	2,282	2,081
Drew .....	3,893	3,594	5,018	4,847	Pulaski .....	13,353	11,976	11,351	10,649
Faulkner .....	7,843	7,151	1,745	1,603	Randolph .....	7,319	6,571	286	309
Franklin .....	9,967	9,289	339	339	St. Francis .....	3,022	2,519	4,200	3,802
Fulton .....	5,673	5,225	36	50	Saline .....	5,080	4,747	746	738
Garland .....	6,635	5,912	1,312	1,469	Scott .....	6,520	6,081	22	12
Grant .....	3,526	3,224	536	500	Searcy .....	4,935	4,695	21	13
Greene .....	6,858	5,889	105	56	Sebastian .....	15,470	13,928	1,940	1,862
Hempstead .....	6,178	5,641	5,541	5,436	Sevier .....	4,513	4,103	727	729
Hot Spring .....	5,367	4,987	656	593	Sharp .....	5,233	5,007	93	85
Howard .....	5,536	5,198	1,555	1,500	Stone .....	3,564	3,366	55	58
Independence .....	10,561	9,820	795	785	Union .....	4,339	4,266	3,131	3,241
Izard .....	6,565	6,211	126	136	Van Buren .....	4,309	4,096	79	83
Jackson .....	5,885	4,964	2,210	2,120	Washington .....	15,758	15,256	475	535
Jefferson .....	6,178	4,773	15,466	14,464	White .....	10,478	9,901	1,322	1,245
Johnson .....	8,364	7,761	351	282	Woodruff .....	3,490	2,962	3,901	3,656
Lafayette .....	1,724	1,433	2,366	2,177	Yell .....	8,548	8,104	708	655
Lawrence .....	6,463	5,688	443	390					

## CITY POPULATION BY COLOR.

Fort Smith .....	4,654	4,025	1,345	1,287	Little Rock .....	8,336	7,778	4,626	5,134
Hot Springs .....	3,199	2,642	1,051	1,194	Pine Bluff .....	3,021	2,354	2,159	2,418

## GROWTH IN WEALTH.

In 1838 the entire taxed wealth of the State was, in round numbers, but \$15,000,000, or about \$1,000 per capita of population. In 1860 this had grown until the Auditor's books showed an aggregate of \$122,000,000, or about \$300 per capita. The war closed showing a taxed valuation of about \$38,000,000. This loss of more than \$80,000,000 in property, besides the other ravages of war, was a tremendous blow at the energies and hopes of the people, and it was believed by many that it would be a half century before the people would

regain their former estate and give to the world a wealth value equal to that possessed by the people at the beginning of the war. But the recuperative power of the people, backed by the remarkable natural resources of the State, have enabled them in less than a quarter of a century not only to regain the full taxed value of 1860, but to increase it 50 per cent. The assessment of all the real and personal property of the State foots up to-day almost \$200,000,000, or about \$175 per capita.

This statement of the assessed wealth of the State shows that Arkansas has not only kept step with her own ratio of growth as indicated by the decades prior to the war, but has also kept step with the whole Union. The whole wealth of the country increased from \$16,902,993,543 in 1880 to \$25,246,589,804, an increase of \$7,346,596,261, or 43.46 per cent.

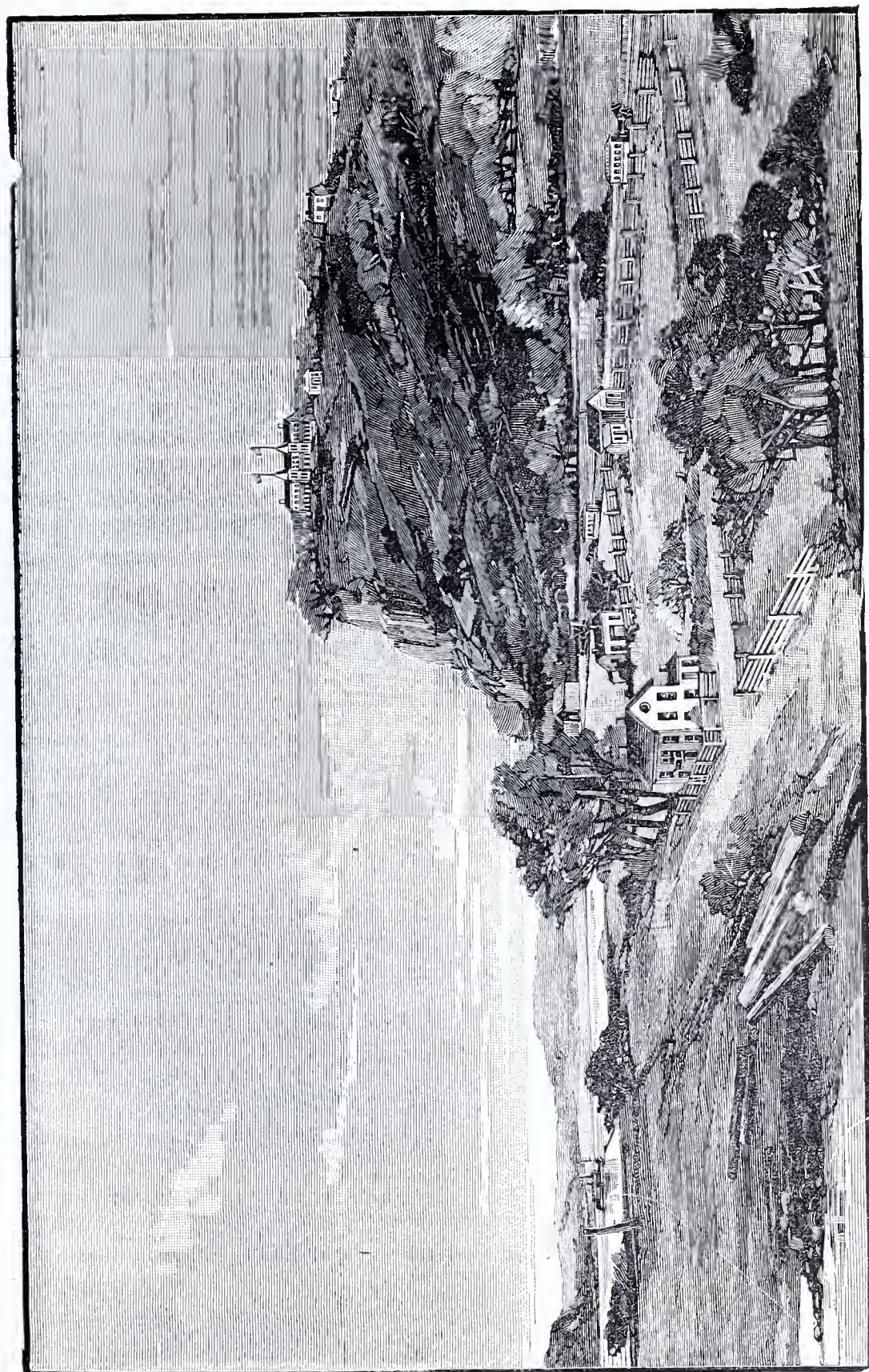
Arkansas increased from \$86,409,364 in 1880 to \$174,737,755 in 1890, an increase of \$88,228,391, or 102 per cent. That is to say, the increase of taxed wealth during the last ten years is greater than the whole amount of property on hand in 1880. Thus, while the population has increased more than 40 per cent, the wealth has increased more than 100 per cent, and both these elements indicate a condition of health in our industries that invites the work, the wealth, and the wisdom, of other sections to our State.

Of States admitted to the Union prior to 1860, Arkansas outstripped them all in percentage of wealth increase during the last decade, except Florida, Minnesota and Texas.

#### TOTALS OF ASSESSED PROPERTY.

1890.		1891.	
Total personal property.....	\$ 65,320,597	Total personal property .....	\$ 63,983,050
Total real property.....	109,417,158	Total real property.....	109,417,158
Total.....	\$174,737,755	Total.....	\$180,053,068





BIG ROCK. (OPPOSITE LITTLE ROCK).



## TOTALS OF ASSESSED PROPERTY BY COUNTIES.

COUNTIES.	TOTAL PERSONAL PROPERTY.		TOTAL REAL ESTATE.		GRAND TOTAL REAL AND PERSONAL PROPERTY.	
	1890.	1891.	1890.	1891.	1890.	1891.
Arkansas .....	\$ 949,290	\$ 964,030	\$ 1,535,010	\$ 1,937,290	\$ 2,484,300	\$ 2,901,320
Ashley .....	641,812	698,819	1,189,588	1,372,792	1,831,400	2,071,611
Baxter .....	566,575	547,444	468,793	497,573	1,035,368	1,045,017
Benton .....	1,355,674	1,399,715	2,217,913	2,273,197	3,573,587	3,672,912
Boone .....	971,427	964,056	999,266	1,080,337	1,970,693	2,044,393
Bradley .....	508,235	544,308	526,902	677,663	1,035,137	1,221,971
Calhoun .....	391,980	414,252	534,911	601,629	926,891	1,015,881
Carroll .....	954,312	884,293	1,758,802	1,637,053	2,713,114	2,521,346
Chicot .....	453,028	385,842	851,069	961,036	1,304,097	1,346,878
Clark .....	1,711,610	1,580,333	1,130,276	1,148,370	2,841,886	2,728,703
Clay .....	623,525	710,118	1,308,240	1,182,222	1,931,765	1,892,340
Cleburne .....	391,566	404,063	429,198	472,186	820,764	876,249
Cleveland .....	775,258	618,415	753,340	877,540	1,528,598	1,495,955
Columbia .....	1,023,361	1,092,515	1,135,138	1,210,932	2,159,199	2,303,447
Conway .....	966,143	865,915	1,841,881	1,987,322	2,808,024	2,853,237
Craighead .....	957,273	1,057,960	2,134,492	2,274,697	3,091,765	3,332,657
Crawford .....	1,004,828	978,465	1,896,553	1,980,914	2,901,381	2,959,379
Crittenden .....	1,057,071		1,058,008		2,115,079	2,424,094
Cross .....	463,044	474,686	1,467,208	1,652,545	1,930,252	2,127,231
Dallas .....	568,958	605,389	622,656	812,263	1,191,614	1,417,652
Desha .....	432,906	321,556	1,175,255	1,248,669	1,608,161	1,570,225
Drew .....	1,274,550	1,214,293	985,299	1,141,260	2,259,849	2,355,553
Faulkner .....	905,370	902,498	1,616,541	1,632,573	2,521,911	2,535,071
Franklin .....	1,106,183	1,103,217	1,767,939	1,779,819	2,874,122	2,883,036
Fulton .....	622,036	702,083	774,130	944,306	1,406,166	1,646,389
Garland .....	1,174,318	1,183,093	2,171,964	3,010,117	3,346,282	4,193,210
Grant .....	401,152	398,535	569,563	656,320	970,715	1,054,855
Greene .....	643,036	709,604	1,677,684	1,695,738	2,320,720	2,405,342
Hempstead .....	1,248,932	1,160,653	1,929,689	2,002,781	3,178,621	3,163,434
Hot Spring .....	688,865	1,118,248	1,141,846	741,766	1,830,711	1,860,014
Howard .....	721,263	665,969	916,647	930,704	1,637,910	1,596,673
Independence .....	1,810,040	1,764,856	2,569,270	2,508,053	4,379,310	4,272,909
Izard .....	808,029	755,143	762,560	813,810	1,570,589	1,568,953
Jackson .....	655,789	730,589	2,205,498	2,632,022	2,861,287	3,361,611
Jefferson .....	2,072,776	2,246,126	4,909,442	5,213,673	7,042,218	7,459,799
Johnson .....	876,721	886,095	1,590,464	1,595,505	2,467,185	2,481,600
Lafayette .....	305,820	334,708	863,838	1,019,228	1,169,658	1,353,936
Lawrence .....	1,016,432	985,256	1,905,179	1,880,127	2,921,611	2,865,383
Lee .....	699,800	743,145	1,723,735	1,787,466	2,423,535	2,530,611
Lincoln .....	464,788	474,655	1,337,450	1,292,137	1,802,238	1,766,792
Little River .....	353,549	332,675	661,609	589,162	1,015,158	921,837
Logan .....	1,164,801	1,132,297	1,673,089	1,634,837	2,837,890	2,767,134
Lonoke .....	1,499,205	1,480,558	2,022,142	2,318,328	3,521,347	3,798,886
Madison .....	796,412	828,456	936,786	881,688	1,733,198	1,710,144
Marion .....	589,604	586,279	452,999	617,203	1,042,603	1,203,482
Miller .....	1,473,030	1,559,960	1,678,560	1,665,340	3,151,590	3,225,300
Mississippi .....	538,972	468,290	1,323,195	1,295,460	1,862,167	1,763,750
Monroe .....	483,323	501,657	1,390,129	1,559,850	1,873,452	2,061,507
Montgomery .....	336,052	289,653	234,625	228,871	570,677	518,524
Nevada .....	1,057,736	1,057,400	986,309	998,032	2,044,045	2,055,432
Newton .....	457,486	436,598	295,318	327,345	752,804	763,943
Onachita .....	1,204,955	1,212,280	1,452,020	1,574,887	2,656,975	2,787,167
Perry .....	261,035	284,034	685,935	687,540	946,970	971,574
Phillips .....	1,059,828	1,093,716	2,476,752	2,816,343	3,536,580	3,910,059
Pike .....	383,025	352,149	425,025	417,839	808,050	769,988
Poinsett .....	509,018	367,289	1,177,713	1,443,931	1,686,731	1,511,220
Polk .....	445,669	424,274	277,580	288,985	723,249	713,259
Pope .....	1,076,116	1,103,673	1,701,887	1,652,802	2,778,003	2,756,475

## TOTALS OF ASSESSED PROPERTY BY COUNTIES—CONTINUED.

COUNTIES.	TOTAL PERSONAL PROPERTY.		TOTAL REAL ESTATE.		GRAND TOTAL REAL AND PERSONAL PROPERTY.	
	1890.	1891.	1890.	1891.	1890.	1891.
Prairie .....	\$ 918,986	\$ 710,443	\$ 1,543,332	\$ 1,610,933	\$ 2,462,318	\$ 2,321,376
Pulaski .....	3,875,679	3,659,851	10,298,750	10,858,637	14,174,429	14,518,488
Randolph .....	791,267	725,689	790,787	816,532	1,582,054	1,542,221
Saline .....	589,330	591,539	1,109,360	1,123,440	1,698,690	1,714,979
Scott .....	584,895	547,302	742,430	714,557	1,327,325	1,261,859
Searcy .....	590,598	563,237	510,720	544,898	1,101,318	1,108,135
Sebastian .....	1,934,313	1,934,753	5,305,051	4,812,311	7,239,364	6,747,064
Sevier .....	556,904	572,427	566,028	586,864	1,122,932	1,159,291
Sharp .....	542,373	530,195	820,762	824,898	1,363,135	1,355,093
St. Francis .....	820,785	899,366	1,719,506	1,887,361	2,540,291	2,786,727
Stone .....	377,660	350,200	332,360	389,232	710,020	739,432
Union .....	617,883	616,977	692,843	757,033	1,310,726	1,374,010
Van Buren .....	420,182	427,031	287,537	305,109	707,719	732,140
Washington .....	1,653,058	1,684,082	2,557,952	2,644,941	4,211,010	4,329,023
White .....	1,450,701	1,405,962	2,569,084	2,658,693	4,019,785	4,064,655
Woodruff .....	566,721	554,788	1,745,846	1,722,217	2,312,567	2,277,005
Yell .....	1,065,670	1,107,030	1,459,200	1,527,190	2,524,870	2,634,220





Statement of the number of acres of land in each county subject to taxation, and the valuation thereof, the valuation of the town or city lots, and of personal property, for the years 1890 and 1891:

COUNTIES.	LAND.				TOWN OR CITY LOTS.		POLLS.	
	No. of Acres 1890.	No. of Acres 1891.	Valuation 1890.	Valuation 1891.	Valuation 1890.	Valuation 1891.	Num- ber 1890.	Num- ber 1891.
Arkansas .....	563,397	572,282	\$ 1,180,590	\$ 1,422,140	\$ 223,320	\$ 285,160	2,543	2,692
Ashley .....	489,683	489,968	1,090,833	1,217,572	.....	39,315	2,491	2,774
Baxter .....	112,951	119,675	436,653	460,698	32,140	36,875	1,578	1,669
Benton .....	382,942	393,597	1,581,203	1,600,390	449,450	471,895	5,261	5,564
Boone .....	206,089	215,282	855,191	926,033	144,075	154,304	2,944	3,023
Bradley .....	308,165	322,122	448,074	581,798	61,233	78,320	1,457	1,494
Calhoun .....	269,414	288,730	464,232	516,695	16,042	17,760	1,348	1,475
Carroll .....	202,361	217,608	881,375	887,870	768,974	660,935	3,071	3,069
Chicot .....	.....	.....	800,394	867,170	31,575	32,741	2,649	2,659
Clark .....	490,972	492,000	891,546	864,562	238,730	283,808	3,927	3,945
Clay .....	348,635	349,237	814,735	648,811	104,205	141,160	2,551	2,579
Cleburne .....	154,439	171,478	372,338	397,909	56,860	74,277	1,535	1,658
Cleveland .....	335,711	340,712	702,185	651,853	51,155	62,808	2,095	2,189
Columbia .....	466,057	466,112	850,814	837,184	113,602	196,575	3,718	3,902
Conway .....	358,689	359,259	1,366,869	1,445,513	290,268	356,435	3,818	3,710
Craighead .....	410,930	410,588	1,101,033	1,223,847	425,213	441,380	2,120	2,540
Crawford .....	.....	308,000	1,457,570	1,525,351	.....	.....	4,058	4,016
Crittenden .....	No Report for 1891.	.....	1,029,978	.....	28,030	.....	3,848	.....
Cross .....	345,804	345,804	766,240	1,065,704	93,735	.....	1,980	1,755
Dallas .....	368,404	331,523	477,330	592,949	107,663	173,993	1,790	1,818
Desha .....	.....	.....	798,120	802,755	128,134	126,339	3,373	2,999
Drew .....	448,975	484,482	810,335	936,380	174,964	204,880	3,235	3,286
Faulkner .....	373,961	378,395	1,270,072	1,265,597	181,990	201,931	4,006	4,068
Franklin .....	332,053	402,189	1,377,449	1,425,371	187,474	178,638	3,897	3,632
Fulton .....	145,100	189,709	483,663	616,730	117,955	150,622	2,144	2,230
Garland .....	160,014	163,101	399,879	536,892	1,772,085	2,473,225	2,934	2,880
Grant .....	355,979	363,629	553,973	637,060	15,590	19,260	1,407	1,417
Greene .....	331,418	332,131	916,825	875,650	229,940	275,095	2,420	2,723
Hempstead .....	445,000	445,800	1,200,744	1,244,078	356,765	381,664	4,342	4,204
Hot Spring .....	300,485	305,013	618,846	638,748	91,553	103,018	2,307	2,351
Howard .....	230,415	232,240	773,977	785,166	142,670	145,538	2,726	2,484
Independence .....	450,616	471,221	2,059,124	1,963,172	510,146	544,881	4,201	4,327
Izard .....	251,802	251,802	722,000	769,000	40,560	44,810	2,505	2,540
Jackson .....	397,349	397,349	1,196,007	1,473,720	346,856	510,595	3,047	3,168
Jefferson .....	512,794	553,709	2,123,880	2,206,210	2,073,800	2,322,780	9,140	8,302
Johnson .....	274,840	288,113	1,091,343	1,080,682	227,580	243,835	2,998	3,254
Lafayette .....	265,249	275,437	561,560	717,660	55,920	78,510	1,549	1,755
Lawrence .....	386,891	367,373	1,041,123	1,015,923	224,383	227,508	2,749	2,850
Lee .....	.....	.....	1,330,480	1,386,690	218,035	240,160	3,824	4,389
Lincoln .....	301,599	312,360	1,214,050	1,169,668	15,690	13,755	2,308	2,480
Little River .....	.....	344,172	647,921	577,114	13,688	12,048	1,948	1,842
Logan .....	342,109	337,455	1,564,911	1,473,949	108,178	160,888	4,044	4,021
Lonoke .....	506,933	487,043	1,794,572	2,093,185	227,570	225,143	4,143	4,571
Madison .....	204,442	261,450	832,790	770,402	31,849	31,483	3,084	3,222
Marion .....	138,270	143,258	452,999	584,518	.....	32,685	1,926	1,979
Miller .....	334,622	.....	969,070	779,560	909,490	885,780	3,226	3,067
Mississippi .....	495,131	473,438	1,282,270	1,227,700	40,925	67,760	2,511	2,405
Monroe .....	424,306	351,670	788,179	872,642	185,580	241,864	2,649	2,912
Montgomery .....	111,058	119,474	214,650	211,234	19,975	17,637	1,474	1,495
Nevada .....	376,082	391,285	986,309	998,032	.....	.....	2,780	2,801
Newton .....	84,394	93,142	295,318	327,345	.....	.....	1,921	1,888
Ouachita .....	417,892	419,010	668,009	686,298	446,059	477,650	3,375	3,419
Perry .....	210,767	193,280	666,705	667,580	19,230	19,960	1,251	1,155
Phillips .....	.....	.....	1,585,387	1,490,460	891,365	1,077,215	4,882	5,231



Statement of the number of acres of land in each county subject to taxation, and the valuation thereof, the valuation of the town or city lots, and of personal property, for the years 1890 and 1891 — Continued.

COUNTIES.	LAND.				TOWN OR CITY LOTS.		POLLS.	
	No. of Acres 1890.	No. of Acres 1891.	Valuation 1890.	Valuation 1891.	Valuation 1890.	Valuation 1891.	Num- ber 1890.	Num- ber 1891.
Pike .....			\$ 425,025	\$ 412,659	\$ .....	\$ 5,180	1,560	1,541
Poinsett .....	453,532	388,341	717,853	676,668	.....	.....	935	943
Polk .....	102,605	107,943	265,822	276,534	11,758	12,451	1,832	1,786
Pope .....	299,980	308,391	1,458,694	1,409,108	.....	.....	3,883	3,860
Prairie .....	392,413	406,063	1,204,710	1,240,895	166,617	189,432	2,330	2,430
Pulaski .....	412,512	408,834	2,091,550	2,213,720	7,166,443	7,537,153	11,407	12,046
Randolph .....	294,170	304,935	741,442	765,068	49,345	51,464	2,901	2,821
Saline .....	319,000	323,420	755,600	761,300	60,700	69,180	2,321	2,527
Scott .....	237,672	245,973	718,380	687,527	24,050	23,285	2,256	2,229
Searcy .....	98,141	106,954	496,045	529,873	14,675	15,025	1,767	1,756
Sebastian .....	336,843	360,471	2,230,225	1,998,674	2,942,378	2,695,730	6,807	5,994
Sevier .....	198,184	204,097	549,108	570,839	16,920	16,025	1,714	1,961
Sharp .....	403,740	224,617	610,844	569,937	.....	39,848	2,061	1,969
St. Francis .....	335,867	346,160	1,102,286	1,231,423	2,145,922	270,798	2,990	3,147
Stone .....	92,394	88,109	322,600	378,342	9,760	10,890	1,320	1,304
Union .....	665,323	509,916	660,902	649,293	31,941	71,200	2,782	2,913
Van Buren .....	119,681	124,084	274,322	286,068	13,215	19,041	1,628	1,711
Washington .....	442,023	457,604	1,630,780	1,717,790	597,514	593,364	5,979	5,977
White .....	651,046	653,340	2,108,027	2,108,677	461,057	550,016	4,600	4,838
Woodruff .....	351,746	352,841	1,166,394	1,146,302	147,735	147,305	3,237	3,447
Yell .....	352,877	360,523	1,198,020	1,304,290	261,180	222,900	3,743	3,832
Total .....			\$71,399,352	\$72,976,204	\$25,463,479	\$27,785,185	227,155	226,970

## LIVE STOCK AS ASSESSED IN 1891.

KIND.	NUMBER.	VALUATION.	KIND.	NUMBER.	VALUATION.
Horses .....	208,670	\$8,555,115	Sheep .....	238,779	\$ 248,479
Mules .....	134,083	7,465,338	Hogs .....	1,243,488	1,411,076
Cattle .....	999,030	6,445,710	Carriages and Wagons .....	112,494	2,420,653

## DEBT.

By reference to volume 1 of Preliminary Results of the Eleventh Census Bulletins it will be found that Arkansas shows but little black in the symbols adopted by the Government to represent the indebtedness of the States and counties of the general Government. A careful analysis of the tables and argument so ably set out in that volume will show a remarkable decrease of State and county indebtedness in Arkansas between the years 1880 and 1890. This decrease represents actual liquidation of genuine indebtedness and does not spring from any decrease growing out of adjudged fraudulent bonds.

When it is known that the power to tax is limited to a fixed constitutional rate, and when it is further considered that nearly all of this rate is needed to meet the ordinary expenses of county government, the tremendous value of this decrease of county indebtedness will become more apparent. It indicates (1) a fixed and unalterable determination to pay; (2) a steady increase of resources; (3) a daring, vigorous body of citizens.

Here are the figures as to the indebtedness of the counties:

Bonded debt, 1880.....	\$ 1,691,689	Gross debt, 1880.....	\$3,135,749
Bonded debt, 1890.....	1,030,631	Gross debt, 1890.....	1,592,582
Decrease.....	\$ 661,058	Decrease.....	\$1,543,167
Floating debt, 1880.....	1,444,060		
Floating debt, 1890.....	561,951		
Decrease.....	\$ 882,109		

This shows a decrease of *49 per cent* in ten years of county indebtedness.

The same volume shows that an amount equal to \$665,327 of available resources is in the various county treasuries of the State. This is equivalent to saying that the entire indebtedness of the counties is at present less than one million dollars and is steadily decreasing.

In fact the large majority of counties are out of debt. Their scrip is at par and they have begun a system of county improvements based upon cash payments. Elegant county buildings are going up in many counties paid for out of revenues already collected and which entail no debt nor interest.

The following line from page 13 of the volume referred to will show the exact state of our county affairs:

#### ARKANSAS.

Gross debt.....	\$1,592,582	Total resources.....	\$665,327
Sinking fund.....	22,567	Net debt.....	927,255
Cash on hand.....	642,760	Annual interest.....	64,868

The counties of Texas show a larger sum in the treasury than those of any Southern State, while Arkansas has the next largest.

But if the total indebtedness of the Southern States be considered together it will be seen that Arkansas leads the whole section as to gross county debt in comparison with available resources. In fact, Arkansas stood in the van in 1880 for both bonded and floating county indebtedness. From 1880 to 1890 she decreased her bonded indebtedness 39 per cent and her floating indebtedness 61 per cent, and her gross indebtedness 49 per cent. While the whole Southern section increased its gross county indebtedness 3 per cent, Arkansas has decreased hers full one-half.

The same creditable process of liquidation is shown in the matter of State finance:

Bonded debt, 1890.....	\$1,963,100	Available resources.....	\$4,782,705
Floating debt, 1890.....	2,832,915	Net debt.....	13,309

See Bulletin 7, page 3.

These figures show a determination to rid the State and its counties of all debt whether of just or unjust parentage and are admirably suited to the devotion, the daring and the development of a growing commonwealth.

## COUNTIES AND THEIR AREA.

Arkansas .....	1,062	Lee .....	606
Ashley .....	927	Lincoln .....	536
Baxter .....	545	Little River .....	547
Benton .....	891	Logan .....	642
Boone .....	672	Lonoke .....	762
Bradley .....	755	Madison .....	891
Calhoun .....	575	Marion .....	634
Carroll .....	659	Miller .....	603
Chicot .....	760	Mississippi .....	696
Clark .....	905	Monroe .....	834
Clay .....	568	Montgomery .....	636
Cleburne .....	558	Nevada .....	861
Cleveland .....	693	Newton .....	838
Columbia .....	825	Ouachita .....	732
Conway .....	493	Perry .....	560
Craighead .....	668	Phillips .....	650
Crawford .....	582	Pike .....	620
Crittenden .....	614	Poinsett .....	720
Cross .....	672	Polk .....	935
Dallas .....	676	Pope .....	795
Desha .....	733	Prairie .....	658
Drew .....	802	Pulaski .....	883
Faulkner .....	623	Randolph .....	622
Franklin .....	672	Saint Francis .....	612
Fulton .....	649	Saline .....	622
Garland .....	622	Scott .....	930
Grant .....	617	Searcy .....	768
Greene .....	591	Sebastian .....	600
Hempstead .....	742	Sevier .....	547
Hot Spring .....	626	Sharp .....	570
Howard .....	629	Stone .....	619
Independence .....	736	Union .....	1,138
Izard .....	547	Van Buren .....	998
Jackson .....	619	Washington .....	927
Jefferson .....	840	White .....	1,137
Johnson .....	612	Woodruff .....	577
Lafayette .....	497	Yell .....	936
Lawrence .....	574	Total, 53,045 Square Miles.	

## SUMMARY OF RAILROAD STATISTICS.

Total number of miles main track .....	2,164.25
Total number of miles side track .....	278.64
Aggregate value of main track .....	\$14,452,663 00
Aggregate value of side track .....	471,952 00
Aggregate value of rolling stock .....	2,926,348 00
Aggregate value of buildings .....	341,313 00
Aggregate assessed value of all property .....	\$18,192,276 00
Average value per mile of all property .....	\$ 8,405 81
Increase in taxable valuation during the year .....	565,562 00

## TAXATION.

The limits to which taxation may go are fixed in the Constitution and are as follows:

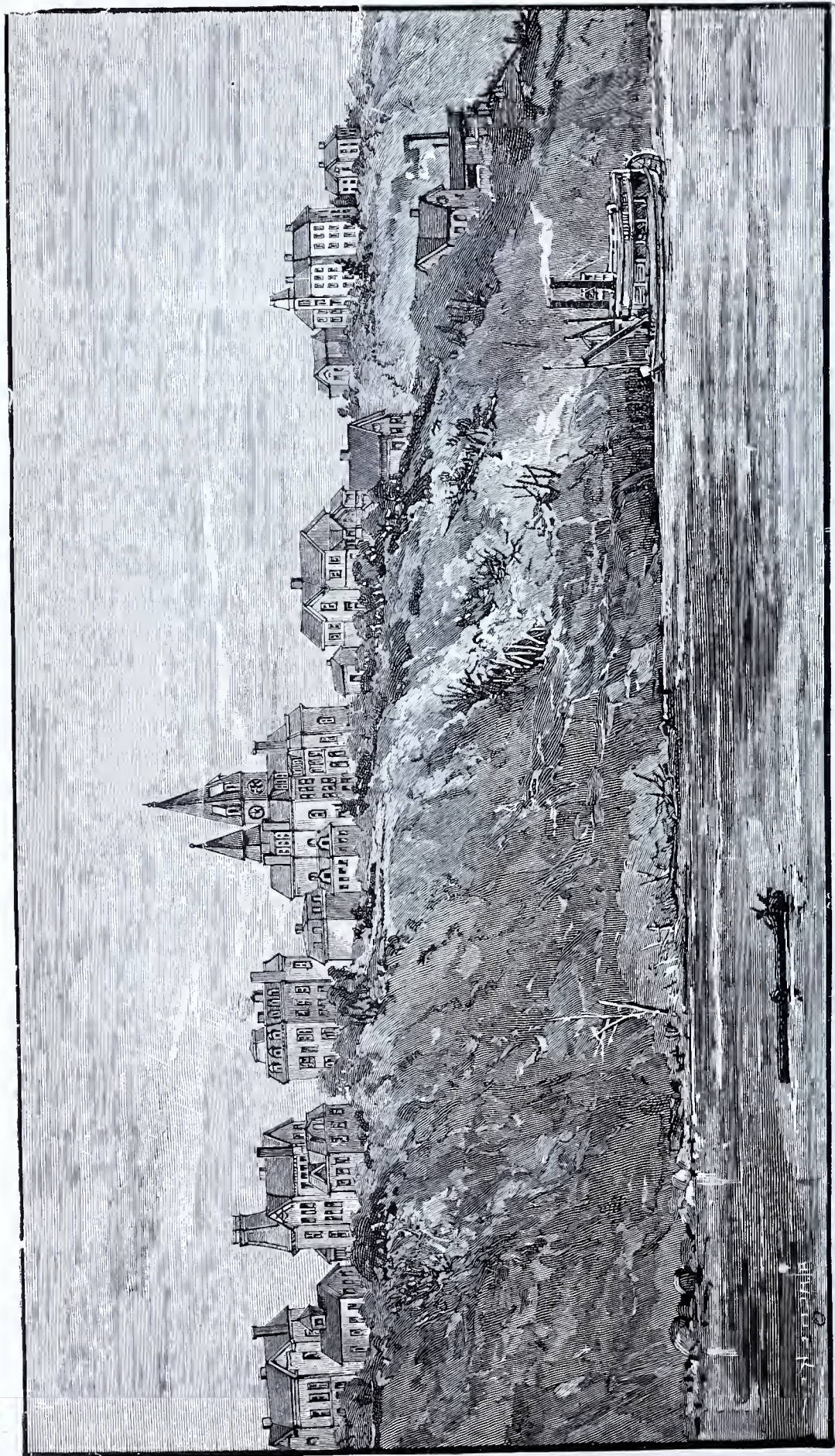
One per centum per annum of the assessed valuation for State taxes.

One-half of one per centum for county purposes, with an additional one-half per centum to pay indebtedness existing at the time of adopting the Constitution.

One-half of one per centum for municipal purposes in cities and towns, with an additional one-half per centum to pay indebtedness existing in 1874.

The State has not levied its limit for many years, the usual levy being about one-half the limit, or five mills on the dollar. Counties that have paid their old indebtedness usually levy five mills. The average rate of taxation for all purposes throughout the State is about fourteen mills on the dollar per annum.





LITTLE ROCK UNIVERSITY.



## EDUCATION.

The Constitution of 1874, the present organic law, made public education by taxation perpetual. Along with the growth of population and wealth has gone a greater development of educational facilities. The system has demonstrated its value to the State and is to-day more firmly imbedded in the affections of a greater number of citizens than any other part of the State's polity. The schools are in every locality open alike to the rich and poor. Although taught in separate schools the black child has an equal showing with the white one.

The enumeration in 1892 was 422,252 between the ages of six and twenty-one. The white enumeration was 307,781; colored 114,471. The actual enrollment was 251,452, of which the whites furnished 187,261 and the blacks 64,191. These ratios of white to black are almost the same as the ratio of white to the black population.

The average attendance for 1892 was 140,445.

The percentage of average attendance upon enrollment was .56 per centum, something more than the same percentage for the same time in New York.

In percentage of enrollment to population Arkansas in 1890 excelled New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, District of Columbia, South Carolina, Georgia, North Dakota, Louisiana, Montana, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Idaho, Alaska, Oregon and California. The only New England State that outranked Arkansas was Maine. The per cent of colored enrollment to population (19.11) was greater than that of any New England or Middle State except Maine as to its whole enrollment.

SUMMARY OF ENUMERATION OF THE SCHOLASTIC POPULATION OF ARKANSAS FROM 1869 to DATE.

1869-70.....	176,910	1881-82.....	272,841
1870-71.....	180,274	1882-83.....	289,617
1871-72.....	196,237	1883-84.....	304,962
1872-73.....	194,314	1884-85.....	323,943
1873-74.....	148,128	1885-86.....	338,506
1874-75.....	168,929	1886-87.....	358,006
1875-76.....	168,929	1887-88.....	377,736
1876-77.....	189,130	1888-89.....	388,129
1877-78.....	203,567	1889-90.....	404,379
1878-79.....	216,475	1890-91.....	405,587
1879-80.....	236,600	1891-92.....	418,566
1880-1881.....	247,457	1892-93.....	422,252

TABLE SHOWING ENUMERATION BY RACES FROM 1883 TO DATE.

1883-84.....	White.....	227,533	1888-89.....	White.....	288,381
1883-84.....	Colored.....	76,429	1888-89.....	Colored.....	99,748
1884-85.....	White.....	247,178	1889-90.....	White.....	297,665
1884-85.....	Colored.....	76,770	1889-90.....	Colored.....	106,714
1885-86.....	White.....	252,290	1890-91.....	White.....	297,904
1885-86.....	Colored.....	86,216	1890-91.....	Colored.....	107,683
1886-87.....	White.....	266,188	1891-92.....	White.....	306,309
1886-87.....	Colored.....	91,818	1891-92.....	Colored.....	112,176
1887-88.....	White.....	279,224	1892-93.....	White.....	307,781
1887-88.....	Colored.....	98,512	1892-93.....	Colored.....	114,471

## SUMMARY OF ENROLLMENT IN THE SCHOOLS OF ARKANSAS FROM JUNE, 1869, TO DATE.

1868-69.....	67,412	1880-81.....	98,744
1869-70.....	107,908	1881-82.....	117,696
1870-71.....	69,927	1882-83.....	112,233
1871-72.....	32,863	1883-84.....	153,216
1872-73.....	59,587	1884-85.....	164,757
1873-74 (no report).....		1885-86.....	175,935
1874-75 (no report).....		1886-87.....	183,095
1875-76.....	15,890	1887-88.....	202,754
1876-77.....	33,370	1888-89.....	216,152
1877-78.....	33,740	1889-90.....	205,262
1878-79.....	55,049	1890-91.....	242,117
1879-80.....	70,973	1891-92.....	251,452

## TABLE SHOWING ENROLLMENT BY RACES FROM 1883 TO DATE.

1882-83.....	White.....	84,101	1887-88.....	White.....	152,184
1882-83.....	Colored.....	28,132	1887-88.....	Colored.....	50,570
1883-84.....	White.....	115,648	1888-89.....	White.....	159,770
1883-84.....	Colored.....	37,568	1888-89.....	Colored.....	56,382
1884-85.....	White.....	122,296	1889-90.....	White.....	154,259
1884-85.....	Colored.....	42,461	1889-90.....	Colored.....	51,003
1885-86.....	White.....	129,137	1890-91.....	White.....	178,289
1885-86.....	Colored.....	46,798	1890-91.....	Colored.....	63,830
1886-87.....	White.....	134,643	1891-92.....	White.....	187,261
1886-87.....	Colored.....	48,452	1891-92.....	Colored.....	64,191

## THE PUBLIC SCHOOL STUDIES.

1891.	1892.
Number studying orthography.....	Number studying orthography.....
Number studying reading.....	Number studying reading.....
Number studying mental arithmetic.....	Number studying mental arithmetic.....
Number studying written arithmetic.....	Number studying written arithmetic.....
Number studying English grammar.....	Number studying English grammar.....
Number studying geography.....	Number studying geography.....
Number studying history.....	Number studying history.....
Number studying higher branches.....	Number studying higher branches.....
Number studying penmanship.....	Number studying penmanship.....
188,552	203,037
168,514	187,271
70,103	80,778
84,469	97,098
43,387	53,726
52,985	63,693
24,973	30,784
3,610	4,545
97,547	104,792

## TEACHERS AND THEIR SALARIES.

TEACHERS.	SALARIES.
Number white male teachers employed, 1892.....	Average salary for first grade male, 1892.....
Number white female teachers employed, 1892.....	Average salary first grade female, 1892.....
Total white teachers employed, 1892.....	Average salary second grade male, 1892.....
Number colored male teachers employed, 1892.....	Average salary second grade female, 1892.....
Number colored female teachers employed, 1892.....	Average salary third grade male, 1892.....
Total colored teachers employed, 1892.....	Average salary third grade female, 1892.....
Total teachers employed, 1892.....	
3,110	\$43 81
1,358	37 25
4,468	34 76
880	32 50
293	30 24
1,173	29 00
5,641	

The month represents twenty days. These tables show a gradual increase in the wages of every grade of teachers and of each sex. The increase of wage earning is almost in direct ratio with teacher improvement.

Every item indicates a vigor almost unparalleled.

From the figures adduced it follows that—

Average wages of all teachers in 1891 was.....	Average wages of males, 1892.....
Average wages of all teachers in 1892 was.....	Increase.....
Increase.....	Average wages of females, 1891.....
Average wages of males, 1891.....	Average wages of females, 1892.....
\$33 65	36 27
34 59	1 15
94	32 18
35 12	32 80

From which it appears that the average wages of males exceeds that of the females by only \$2.94, if 1891 be taken as a basis; and by \$3.47 if 1892 be taken.

The average monthly wages in the towns of New York for 1891 was \$33.08, or 55 cents less than the average for all classes in Arkansas.

Average female wages in Massachusetts.....	\$44 79	Excess in favor of Arkansas .....	\$ 5 91
Excess over Arkansas .....	11 99	Iowa, 1891, males .....	37 54
Michigan average males (1890) .....	32 31	Excess against Arkansas.....	2 42
Michigan average, females .....	25 22	Iowa, 1891, females .....	30 52
Excess in favor of Arkansas for males.....	2 81	Excess in favor of Arkansas .....	1 66
Excess in favor of Arkansas for females.....	6 56	Ohio, 1890, elementary schools, males.....	37 00
Tennessee average monthly wages, 1891 .....	31 37	Ohio, 1890, elementary schools, females .....	27 00
Arkansas, 1891.....	33 65	Ohio, 1890, country high schools, males.....	58 00
Excess in favor of Arkansas.....	2 28	Ohio, 1890, country high schools, females.....	39 00
Mississippi, 1891.....	27 74		

The total number of schoolhouses owned by the State in 1892 was 2,946 with a value of \$1,765,831.

### SCHOOL REVENUES.

The school revenues are drawn from an annual levy of two mills on all the property of the State; a local levy of not exceeding five mills in every district, and a poll tax of one dollar.

These several taxes yielded the following amounts in 1892 :

State tax.....	\$ 321,545 39	Local tax.....	\$ 600,102 40
Poll tax.....	154,728 40	Miscellaneous.....	10,800 66
			\$1,087,236 85

The expenditures were :

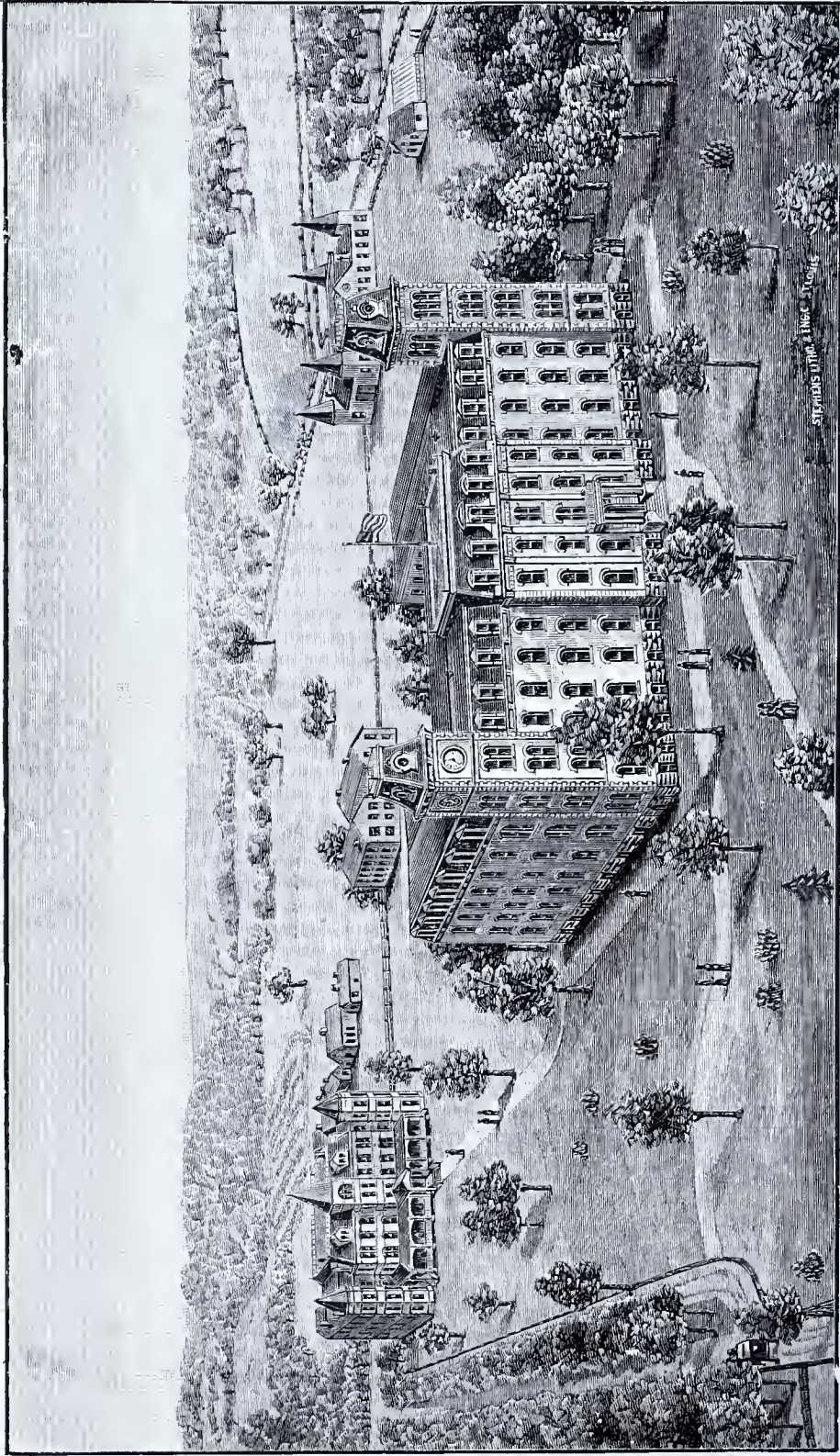
For teachers' salaries.....	\$907,141	For apparatus .....	\$ 12,505
For houses.....	4,200	For commissions .....	30,077
For building.....	104,166		

Excepting Mississippi, West Virginia and six other Northern States, Arkansas expended in 1891 more money on public schools in proportion to the taxed wealth of the State than any other State in the Union.

### EDUCATION IN THE SOUTH.

The following exhibit shows at a glance the steady progress of the Southern States in the development of common school education. There are no statistics accessible that show separate items for the white and colored schools previous to 1876. Since that period the enrollment of white pupils has increased 75 per cent, while the white population has increased little more than 30. The colored enrollment has increased 113 per cent, while the colored population has increased less than 25 per cent. The amount of money expended from public funds has increased from \$11,000,000 to \$23,000,000 per annum.





ARKANSAS INDUSTRIAL UNIVERSITY, FAYETTEVILLE.

## SIXTEEN FORMER SLAVE STATES AND THE DISTRICT OF COLUMBIA.

YEAR.	COMMON SCHOOL ENROLLMENT.		COLORED.			EX-PENDITURES.
	White.	Colored.	Normal Schools.	Other Sec-ond'y and Higher.	Total Colored.	Both Races.
1876-77 .....	1,827,139	571,506	3,785	4,726	580,017	\$ 11,231,073
1877-78 .....	2,034,946	675,150	5,236	7,795	688,181	11,760,214
1878-79 .....	2,013,684	685,942	6,171	8,253	700,366	12,181,602
1879-80 .....	2,215,674	784,709	7,408	7,996	800,113	12,475,044
1880-81 .....	2,234,871	802,374	7,621	8,372	802,372	13,359,784
1881-82 .....	2,249,263	802,982	8,509	9,889	821,380	14,820,972
1882-83 .....	2,370,110	817,240	8,509	9,889	835,638	14,324,925
1883-84 .....	2,546,448	1,002,313	10,771	13,035	1,026,119	17,053,467
1884-85 .....	2,676,911	1,030,463	8,390	15,110	1,053,963	17,227,373
1885-86 .....	2,773,145	1,048,659	6,207	16,831	1,071,697	18,439,891
1886-87 .....	2,975,773	1,118,556	1,771	11,577	1,131,904	20,821,999
1887-88 .....	3,110,606	1,140,405	5,439	12,254	1,158,098	21,810,158
1888-89 .....	3,197,830	1,213,092	7,462	18,068	1,238,622	23,226,982

Total amount expended in thirteen years, \$216,644,699. (U. S. Education Report, 1888-89.)

Since 1888-89 there has been expended fully \$100,000,000, making a grand total in seventeen years of more than \$316,000,000. Of this fully 40 per cent was used for the education of colored children, a far greater sum than their relative numerical population, or their contributions in taxes. The assertion that injustice is or has been done the colored children of the South by the white citizens is not borne out by the facts.

## HOMICIDE.

It has been charged that homicide is the natural law of the South, and especially of Arkansas. The following brief selection from the census of 1890 will help to dispel this illusion. The number following the name of each State indicates the ratio of homicides in a State to a million of its population:

SOUTHERN STATES.		WESTERN GROUP.	
South Carolina.....	139	Arkansas .....	176
Georgia.....	189	Kansas .....	121
Florida.....	289	Montana.....	340
Kentucky.....	236	Colorado.....	184
Tennessee.....	168	New Mexico.....	358
Alabama.....	222	Arizona.....	906
Mississippi.....	168	Nevada.....	896
Louisiana.....	293	Idaho.....	308
Texas.....	327	California.....	346

Now, whatever may be the degree of Southern lawlessness it must be conceded that it cannot compare with the Western article, and that Arkansas is a highly civilized community when compared with Montana or California. If increase of homicides is any index to the prevailing moral sentiment, then Arkansas has a better moral sentiment than Vermont. The State of Vermont pushed its ratio of homicides from 33 in 1880 to 72 in 1890, or 118.18 per cent. Arkansas advanced from 133 in 1880 to 176 in 1890, or 32.33 per cent, or a difference of 85.85 per cent in favor of improvement in Arkansas. In fact, the average increase of percentage in the North Atlantic group of States was 41.38 per cent, as against an increase of 32.33 per cent in Arkansas. From this it is evident that the life of every emigrant is nearly twice as secure in Arkansas as it is in California or Montana, and about four times that of Nevada.



## TEMPERANCE.

This vexed question has for years been the burden of the best thought of the State. It is controlled legally in several ways:

1. By special enactments prohibiting the sale of intoxicants within a radius of from three to ten miles of certain churches or schoolhouses.
2. By the majority vote of the citizens of a county.
3. By the petition of a majority of the adults in a county or town. Every woman is permitted to sign the petition and has an equal voice in the final decision of this matter.

The combined action of these three laws has almost banished the saloon from the State. Whole counties are absolutely free and the moral sentiment of the State is decidedly opposed to intemperance and to the open saloon. The officers of the State, counties and towns are as a rule sober men. No State in the Union can show a better temperance record, whether in law or private life, than Arkansas has shown during the last twenty years. From Little Rock to Van Buren, one hundred and sixty miles, there is but one open saloon. Twenty-two counties exclude the sale of intoxicants entirely while the greater part of every county is under some form of prohibition enactment.

## INCORPORATED COMPANIES.

Since January 1, 1889, there have been four hundred and twenty manufacturing associations formed with capital stocks ranging from five thousand dollars, the least, to one million dollars, the greatest. The usual capital stock being fifty thousand dollars.

## BANKS.

Since January 1, 1889, fifty-four banks have been incorporated with paid up capital stock amounting to more than three millions of dollars. These institutions added to the older banks give ample protection to depositors and furnish the means for a great commercial activity.

## BUILDING AND LOAN ASSOCIATIONS.

Besides the regular banks there have been established since January 1, 1889, about forty-five building and loan companies with a capital of more than twenty millions of dollars. This vast amount is virtually invested in thousands of modern homes abounding in joy and numberless comforts.

## LANDS.

The varying character of our lands and their wonderful adaptability are well shown in the following careful estimate taken from "Arkansas," a pamphlet issued by the Arkansas Bureau of Mining, Manufacturing and Agriculture:

No. of acres.....	33,500,000	No. of acres of State lands .....	1,364,022
No. of acres of timber lands.....	19,000,000	No. of acres of coal lands.....	2,500,000
No. of acres under cultivation.....	9,500,000	No. of acres of iron ore lands .....	1,500,000
No. of acres adapted to fruit growing....	10,000,000	No. of acres of prairie land.....	1,800,000
No. of acres of Government lands.....	4,000,000		



The following statement from the last report of Hon. C. B. Myers, Land Commissioner of Arkansas, will show the quantity of land now belonging to the State :

CLASS.—FORFEITED LANDS.	ACRES.
Quality passed through overdue tax suits under acts of 1881, now subject to taxation or sale } at \$1.25 per acre.....	290,160.00
Quality subject to donation or sale at \$1.25 per acre, upon which no suit was ever brought } under the overdue tax acts of 1881.....	681,800.00
Vacant swamp lands .....	53,870.05
Internal improvement lands.....	26,293.41
Seminary lands.....	514.36
Saline lands.....	11,415.71
Real Estate Bank lands.....	5,988.12
Total number of acres.....	1,070,041.65

## CEREALS.

The following figures from the census of 1890 show the production of the cereals in Arkansas as compared with several other States.

### AVERAGE YIELD PER ACRE.

STATES.	Indian Corn.	Oats.	Rye.	Wheat.	STATES.	Indian Corn.	Oats.	Rye.	Wheat.
Arkansas .....	20.61	14.50	6.15	6.80	Florida .....	9.77	9.32	15.70	9.06
Wyoming .....	12.73	27.39			Delaware .....	17.72	19.76	8.55	15.91
Montana .....	13.96	29.10			North Dakota.....	15.35	14.32	7.78	9.74
Idaho .....	18.13	26.70			South Dakota .....	17.46	12.87	7.06	7.32
Utah .....	14.66	26.29			North Carolina .....	10.92	8.33	4.90	6.44
Colorado.....	12.67	28.59			South Carolina.....	10.23	9.80	4.19	3.70
New Mexico.....	20.45	22.13			Virginia.....	16.98	11.49	7.63	10.72
Arizona.....	19.06	23.10			Oregon .....	19.68	27.20	9.23	16.81
Georgia.....	11.33	9.22	4.15	5.58	Washington .....	16.33	34.92	10.88	17.03
Alabama.....	14.14	9.37	6.67	5.26					

### ACTUAL YIELD IN 1889.

Indian corn .....	1,648,443 acres. 33,982,318 bushels.	Wheat .....	140,464 acres. 955,668 bushels.
Oats .....	288,332 acres. 4,180,877 bushels.	Barley.....	106 acres. 904 bushels.
Rye .....	2,470 acres. 15,181 bushels.	Buckwheat .....	388 acres. 5,074 bushels.

### ACTUAL YIELD OF CORN IN SEVERAL STATES IN 1889.

Arkansas.....	33,982,318 bu.	New Hampshire.....	988,806 bu.	Arizona.....	82,535 bu.
Virginia .....	27,154,633 "	Vermont.....	1,700,688 "	North Dakota.....	183,929 "
Georgia .....	29,261,422 "	Rhode Island.....	253,810 "	Oregon .....	238,203 "
South Carolina.....	13,770,417 "	Massachusetts .....	1,330,101 "	Washington .....	156,413 "
Alabama .....	30,073,036 "	Connecticut.....	1,471,979 "	Wyoming .....	25,162 "
North Carolina.....	25,783,620 "	California.....	2,381,270 "	Montana .....	14,225 "
Florida .....	3,701,264 "	Michigan.....	28,785,579 "	Idaho .....	24,095 "
West Virginia.....	13,730,506 "	Colorado .....	1,511,907 "	Utah.....	84,760 "
Maine .....	380,662 "	New Mexico.....	583,489 "	Nevada .....	6,540 "
Delaware.....	3,097,164 "	Minnesota.....	24,696,446 "		

It will be seen that Arkansas leads all that are named.

## SUMMARY OF CEREAL PRODUCTION OF ARKANSAS IN 1889.

COUNTIES.	INDIAN CORN.		OATS.		WHEAT.	
	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
Total .....	1,648,443	33,982,318	288,332	4,180,877	140,464	955,668
Arkansas .....	14,458	259,898	1,392	29,259	59	733
Ashley .....	17,759	333,170	930	8,336	2	15
Baxter .....	14,421	336,565	5,324	101,174	4,171	27,026
Benton .....	59,337	1,340,329	23,490	451,736	21,106	162,639
Boone .....	34,294	834,100	9,609	192,210	10,146	64,629
Bradley .....	12,653	182,992	1,506	13,706	18	80
Calhoun .....	13,125	167,186	1,352	10,390		
Carroll .....	33,369	844,743	9,789	188,345	7,528	48,767
Chicot .....	6,166	117,943	153	1,577		
Clark .....	29,121	477,226	2,715	35,621	110	555
Clay .....	22,174	484,540	1,249	21,098	1,734	14,028
Cleburne .....	14,339	290,112	3,370	45,250	373	1,670
Cleveland .....	16,346	238,200	1,910	19,036	4	50
Columbia .....	35,074	419,905	2,244	16,812	10	250
Conway .....	24,038	496,401	3,649	45,893	1,160	5,443
Craighead .....	19,143	442,723	2,609	28,064	480	3,264
Crawford .....	29,500	709,182	5,563	78,088	1,142	5,941
Crittenden .....	8,864	209,412	23	290		
Cross .....	7,523	147,674	314	4,133	12	80
Dallas .....	13,451	183,256	1,721	13,346	18	146
Desha .....	8,325	194,646	89	524		
Drew .....	20,799	344,335	2,790	29,740	65	233
Faulkner .....	29,387	556,324	5,502	69,808	933	5,954
Franklin .....	35,253	744,816	10,228	137,094	2,629	12,040
Fulton .....	17,651	430,907	6,751	105,794	3,011	17,172
Garland .....	11,811	206,549	2,232	32,119	561	2,448
Grant .....	15,197	216,444	2,081	15,499		
Greene .....	22,955	455,667	2,161	29,699	1,314	9,550
Hempstead .....	34,344	541,831	3,978	46,429	291	1,098
Hot Spring .....	16,814	329,408	2,294	27,608	157	1,278
Howard .....	24,166	413,203	3,142	31,889	817	3,725
Independence .....	36,199	891,044	6,907	77,618	2,307	12,137
Izard .....	28,207	597,897	8,129	102,996	2,703	13,256
Jackson .....	23,681	568,131	743	13,447	92	1,067
Jefferson .....	20,728	467,388	580	5,256		
Johnson .....	27,925	651,004	7,197	102,953	1,538	9,337
Lafayette .....	10,123	155,067	380	4,703	2	30
Lawrence .....	21,612	536,374	3,510	44,003	1,053	7,461
Lee .....	16,181	357,612	398	8,400		
Lincoln .....	8,105	152,658	150	1,918		
Little River .....	13,835	243,806	866	12,363	23	424
Logan .....	35,915	828,359	11,283	157,599	3,512	17,932
Lonoke .....	24,428	501,274	3,907	54,735	28	198
Madison .....	39,354	941,099	8,142	120,224	9,583	69,124
Marion .....	19,518	433,250	3,495	60,980	4,649	26,811
Miller .....	17,937	290,389	1,397	13,179		
Mississippi .....	12,534	464,671	114	2,950		
Monroe .....	18,441	304,669	458	9,163	63	681
Montgomery .....	15,606	315,671	2,056	26,236	1,386	7,604
Nevada .....	28,246	381,503	3,444	37,961	58	371
Newton .....	18,199	381,419	2,535	38,657	3,214	20,484
Ouachita .....	24,152	288,720	1,114	9,634		
Perry .....	9,176	210,555	1,502	24,214	432	2,435
Phillips .....	22,961	488,152	282	2,570		
Pike .....	17,007	304,381	2,647	29,712	421	1,723
Poinsett .....	6,191	148,199	333	6,323		
Polk .....	19,715	365,783	3,636	42,922	2,401	11,668
Pope .....	32,360	718,157	5,544	64,190	2,852	15,805

## SUMMARY OF CEREAL PRODUCTION OF ARKANSAS IN 1889—CONTINUED.

COUNTIES.	INDIAN CORN.		OATS.		WHEAT.	
	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
Prairie .....	14,984	296,448	2,061	33,917	207	2,679
Pulaski .....	20,326	454,559	2,942	41,818	39	700
Randolph .....	33,048	773,996	7,137	104,294	3,540	22,269
St. Francis .....	11,048	207,466	570	9,547		
Saline .....	17,527	324,244	2,753	31,386	140	855
Scott .....	22,576	477,690	6,520	83,390	1,203	6,348
Searcy .....	18,230	419,800	8,412	52,152	3,937	24,947
Sebastian .....	34,237	793,298	10,644	154,842	2,040	11,411
Sevier .....	18,416	338,621	1,184	10,780	538	2,537
Sharp .....	22,527	479,268	7,122	86,645	2,486	12,385
Stone .....	12,344	312,516	2,605	46,402	1,524	8,782
Union .....	30,437	350,227	2,042	13,166	44	269
Van Buren .....	18,616	350,801	4,452	50,273	1,212	5,623
Washington .....	70,828	1,832,189	21,460	403,678	26,511	236,659
White .....	34,171	613,868	6,868	80,295	190	846
Woodruff .....	14,890	378,978	133	2,514	10	35
Yell .....	29,045	641,430	5,448	67,305	2,675	12,861

In Arkansas the total area in cereals in 1889 was 2,080,203 acres, as compared with 1,672,446 acres in 1879. There was an increase of 350,133 acres in the area devoted to corn, and 121,819 acres in the area in oats. On the other hand, there was a decrease of 63,620 acres in the area devoted to wheat.







COTTON PLANTATION IN JACKSON COUNTY.



## COTTON.

## SUMMARY OF BALES COTTON RAISED IN ARKANSAS IN 1879 AND 1889.

COUNTIES.	1889.		1879.	
	Acres.	Bales.	Acres.	Bales.
Total .....	1,700,612	691,423	1,042,976	608,256
Arkansas .....	13,718	7,197	12,611	8,508
Ashley .....	30,633	17,246	19,555	11,371
Baxter .....	8,495	3,467	4,798	2,879
Benton .....	28	10	286	126
Boone .....	7,461	2,377	5,095	2,686
Bradley .....	14,970	6,218	12,221	4,900
Calhoun .....	15,564	5,273	13,377	5,370
Carroll .....	1,230	289	982	502
Chicot .....	33,624	21,480	26,941	25,338
Clark .....	28,566	11,190	25,092	13,924
Clay .....	7,392	2,059	4,239	2,307
Cleburne .....	7,800	2,275	.....	.....
Cleveland (*) .....	22,376	9,018	15,462	6,146
Columbia .....	45,733	13,352	32,427	13,039
Conway .....	37,149	12,062	15,424	9,096
Craighead .....	10,686	3,838	7,246	4,374
Crawford .....	35,069	13,375	16,145	8,980
Crittenden .....	44,309	19,186	24,413	16,039
Cross .....	11,262	4,656	7,607	4,768
Dallas .....	15,039	5,791	14,306	6,157
Desha .....	26,941	16,641	21,159	18,103
Drew .....	38,398	17,609	21,796	9,964
Faulkner .....	34,381	12,141	15,749	8,692
Franklin .....	32,342	10,954	16,205	9,268
Fulton .....	9,116	2,484	3,994	2,438
Garland .....	2,725	1,011	993	534
Grant .....	13,956	5,335	9,680	3,999
Greene .....	9,330	2,421	6,886	3,711
Hempstead .....	44,068	15,985	27,142	13,985
Hot Spring .....	10,667	4,092	8,068	3,755
Howard .....	22,952	8,521	12,259	7,051
Independence .....	30,230	9,651	19,602	11,156
Izard .....	15,069	4,235	9,029	4,800
Jackson .....	33,446	12,594	21,718	13,895
Jefferson .....	90,996	47,341	45,426	34,588
Johnson .....	21,750	7,667	12,217	7,769
Lafayette .....	15,193	5,767	10,611	6,339
Lawrence .....	15,191	4,727	10,768	6,480
Lee .....	65,864	25,278	33,009	21,147
Lincoln .....	18,330	9,112	17,519	11,563
Little River .....	16,733	7,252	10,368	7,116
Logan .....	36,431	14,476	16,377	9,752
Lonoke .....	38,651	18,972	20,910	11,704
Madison .....	20	18	255	129
Marion .....	8,211	2,780	7,116	3,925
Miller .....	23,623	8,970	19,111	11,643
Mississippi .....	31,734	14,648	13,326	10,430
Monroe .....	34,144	18,989	22,017	14,106
Montgomery .....	7,316	2,397	3,512	1,819
Nevada .....	31,598	10,588	23,925	10,520
Newton .....	4,289	1,480	2,602	1,406
Ouachita .....	30,757	10,541	23,855	8,849
Perry .....	11,219	4,252	5,082	3,314
Phillips .....	64,142	29,923	42,654	29,070
Pike .....	13,531	4,831	7,341	3,787
Poinsett .....	3,534	1,592	2,373	1,514

\* Dorsey County 1879.

## SUMMARY OF BALES COTTON RAISED IN ARKANSAS, ETC.—CONTINUED.

COUNTIES.	1889.		1879.	
	Acres.	Bales.	Acres.	Bales.
Polk.....	9,662	2,831	4,230	2,061
Pope.....	31,288	11,272	15,062	8,700
Prairie.....	20,802	9,587	12,124	6,977
Pulaski.....	40,564	21,485	29,097	20,439
Randolph.....	18,194	4,905	11,028	6,248
St. Francis.....	26,828	11,602	11,857	5,966
Saline.....	13,263	5,774	8,846	5,075
Scott.....	15,521	6,415	8,867	4,826
Searcy.....	6,689	2,405	4,320	2,464
Sebastian.....	30,217	11,778	19,722	11,112
Sevier.....	15,801	5,635	7,283	4,075
Sharp.....	14,138	3,643	8,455	4,350
Stone.....	5,808	1,858	3,656	2,049
Union.....	40,272	12,063	30,136	11,013
Van Buren.....	10,603	3,156	7,084	3,377
Washington.....	509	140	302	133
White.....	33,806	11,514	23,304	11,821
Woodruff.....	38,834	17,453	18,124	12,311
Yell.....	29,830	12,273	16,598	10,428

## SUMMARY OF BALES COTTON RAISED BY STATES.

STATES.	Acres.	Bales.	STATE.	Acres.	Bales.
North Carolina.....	1,747,206	336,245	Alabama.....	2,761,771	915,414
South Carolina.....	1,987,651	746,798	Mississippi.....	2,882,499	1,154,406
Georgia.....	3,345,526	1,191,919	Louisiana.....	1,270,885	659,583
Florida.....	227,370	57,928	Arkansas.....	1,700,612	691,423
Tennessee.....	745,176	189,072	Texas.....	3,932,755	1,470,353

From these figures it appears that Arkansas stands second in actual yield per acre, the percentages of yield being:

STATES.	Bales.	STATES.	Bales.
North Carolina.....	20	Mississippi.....	40
South Carolina.....	37	Louisiana.....	52
Georgia.....	35	<b>Arkansas</b> .....	<b>41</b>
Florida.....	24	Texas.....	37
Tennessee.....	25	Missouri.....	26
Alabama.....	32	Virginia.....	14
Kentucky.....	33		

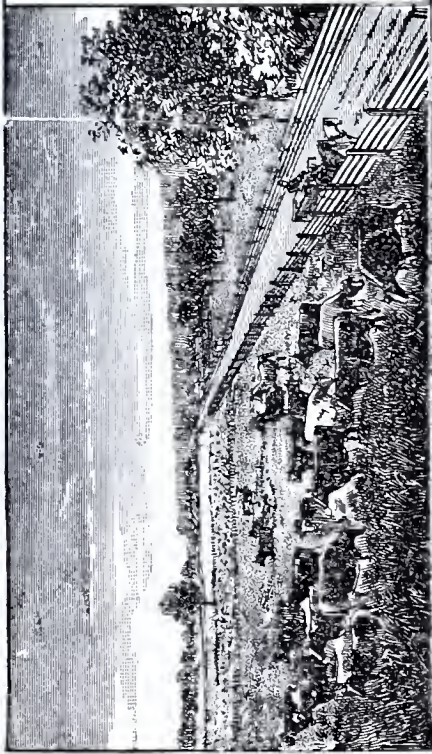
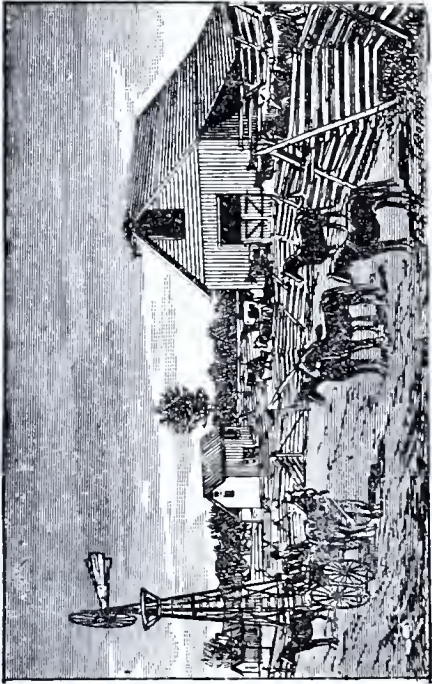
## FLAX.

The following table shows rank of the State in several important details as to the flax industry:

	Rank.		Rank.
Acreage.....	27	Total value of products.....	28
Production of seed.....	28	Average yield of seed per acre.....	20
Production of fibre.....	21	Average value of products per acre.....	22

The industry is carried on to a limited extent in Desha, Madison and Prairie Counties.





STOCK FARM NEAR DARDANELLE.



## HORSES, MULES AND ASSES.

Horses on hand 1890.....	186,867	Mules.....	124,888	Asses.....	1,600
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Twenty-eight States and territories produced a smaller number of horses, and forty-one a smaller number of mules. The States which outrank Arkansas in production of mules are Georgia, Missouri, Kentucky, Tennessee, Alabama, Mississippi and Texas.

## TOBACCO.

There were 5,448 planters of tobacco in 1890 with an area of 1,875 acres in cultivation. The crop yielded 954,640 pounds valued at \$89,862. Average yield per acre 509 pounds. The State ranks 16 in acreage and production, 21 as to average yield per acre, 17 as to value of product, 18 as to average value per pound and 8 as to number of planters. Every county in the State except Lee was reported in 1890 as cultivating tobacco.

## NURSERIES.

In 1890 there were 68 nurseries, using 767 acres of land at a value of \$38.90 per acre, or a total value of \$80,410. The total capital invested that year was \$119,800; 421 acres were devoted to the growth of trees; 84 to apple, 21 to cherry, 22 to peach, 35 to pear, 32 to plum, 5 to other trees; 34 to grape vines, 128 to strawberries, 19 to raspberries, 13 to blackberries and 28 to miscellaneous plants; 11,900 one-year apple trees were grown to the acre, which sold at the average wholesale price of \$5.22 per 100.

12,000 apricots trees per acre	@ \$ 7 00 per 100.	11,000 quince “ “	@ \$ 8 00 per 100.
10,000 cherry “ “	@ 8 00 per 100.	15,571 grape vines “	@ 4 07 per 100.
13,000 peach “ “	@ 5 37 per 100.	44,000 strawberries “	@ 28 per 100.
10,000 pear “ “	@ 13 50 per 100.	20,000 raspberries “	@ 60 per 100.
10,600 plum “ “	@ 11 32 per 100.	20,000 blackberries “	@ 85 per 100.

## FLORISTS.

Arkansas has ten establishments of this kind, cultivating twenty acres with a value of \$30,800. In 1890 these establishments propagated 26,750 roses and 25,000 hardy plants. All other plants aggregated 213,750. The total plant sale reached \$21,250, and the cut flowers sold for \$2,875.

The figures for the full cash value per acre on all crops taken together are not yet collated, but the following taken from the first Bulletin of the Arkansas Bureau as gathered from the census of 1880 has not lost any of its force, and will doubtlessly be strengthened by the decade just passed:

Maine.....	\$13 51	Georgia.....	\$10 35	Illinois.....	\$12 47
New Hampshire.....	13 56	Florida.....	8 52	Wisconsin.....	13 80
Vermont.....	11 60	Alabama.....	13 49	Minnesota.....	10 29
Connecticut.....	16 82	Mississippi.....	14 76	Iowa.....	8 88
New York.....	14 15	Louisiana.....	22 40	Missouri.....	10 78
New Jersey.....	18 05	<b>Arkansas.....</b>	<b>20 40</b>	Kansas.....	9 11
Pennsylvania.....	17 68	Tennessee.....	12 39	Nebraska.....	8 60
Delaware.....	15 80	West Virginia.....	12 74	California.....	17 18
Maryland.....	17 82	Kentucky.....	13 58	Oregon.....	17 11
Virginia.....	10 91	Ohio.....	15 58	Texas.....	14 69
North Carolina.....	10 79	Michigan.....	18 96	Nevada, Colorado and the	
South Carolina.....	10 09	Indiana.....	14 66	Territories.....	16 13

## MINERAL WATERS.

There are hundreds of mineral springs in Arkansas aside from the great resorts at Hot Springs, Eureka Springs and Mammoth Springs. Only three report the preparation of waters for commercial purposes. The product bottled in 1889 reached 110,200 gallons and yielded a value of \$10,020. The capital invested in the business amounted to \$12,525, and paid a wage sum of \$3,690. The greater value of these Springs as health resorts, scattered as they are over more than twenty counties, makes the lesser work of bottling their waters for sale a comparatively small amount. The annual expenditure of money by the visitors at Hot Springs reaches the enormous sum of \$10,000,000. The three reporting springs are the Arkansas Lithia Springs of Hope, Fairchild Potash Sulphur Springs of Potash Sulphur, and the Mountain Valley Springs of Mountain Valley. Other springs are commercially engaged but no report has been made. A true report would place the State among the leaders of those who prepare mineral waters for sale. For great spring resorts and visitors no State in the Union surpasses Arkansas.

## LIMESTONE.

The industry has hardly opened. The value of the product in 1889 was \$18,360; the capital employed \$32,531. The per cent of profit on the capital employed was 12.05 per cent, and on the value of the product 21.35 per cent. The per centum of wages to expenses was 68.21, and to total value 53.61. With a greater transportation this will become a great source of wealth. Seven quarries produced 18,760 cubic feet for building purposes, valued at \$18,360, and 37,600 barrels of lime, valued at \$14,600.

## GRANITE.

The immense beds of this stone are now attracting general attention. Whether as paving stone or as building material, the Arkansas granite is unsurpassed. The splendid courthouse at Little Rock is a monument to this beautiful stone. Large quantities have been used for paving purposes in Louisville, Ky., and Little Rock. Several large quarries near Little Rock are doing a handsome business. The census of 1890 says: "Arkansas, though holding next to the last place in the list of States for 1889, will doubtless show a much greater output in the course of a few years owing to developments already made in the vicinity of Little Rock of what is known as Fourche Mountain granite, which is, strictly speaking, syenite."

### USES OF BLUE GRANITE.

The blue granite (pulaskite) has already been quarried to a considerable extent both as a building stone and as a material for roads, either in the form of Belgian blocks for streets or of crushed stone for macadamized highways. As a building stone it has been used very largely in the form of window and door-sills, window-caps, water-tables, stone steps, and foundation materials, and has also been used as the principal wall stone in several large edifices.

The Pulaski County courthouse on the corner of Second and Spring Streets, Little Rock, is built above the basement of blue granite (pulaskite) trimmed with limestone. The basement is constructed of the brown granite (dike rock). This building is tasteful and the contrast between the different stones used in its construction is very pleasing.

The Roman Catholic cathedral on the corner of Seventh and Louisiana Streets, Little



Rock, is built partly of the blue and partly of the brown granite, but the two stones are mingled in such a way, as to give a somewhat mottled appearance to the building. It is, therefore, not as handsome a building as would have been produced had either rock been used alone.

The Dallas County courthouse in Dallas, Texas, is built in part of the blue granite of Arkansas and is already so far completed as to show that it will be an extremely handsome building. Several other buildings in Dallas are built in part of the Arkansas stone.

The First Methodist Church of Memphis, Tennessee, is built mostly of the blue granite, and this material has been extensively used in the construction of a large brewery in the same city.

The stone appears in many store fronts, retaining walls, bridge piers and abutments throughout the State, and has also been much used for such minor purposes as hitching and gateposts and mounting blocks.

Thousands of tons of this rock have been quarried for Belgian blocks, and have been shipped to many of the neighboring cities, as Louisville, Memphis, etc., as well as having been used in Little Rock itself. No better stone can be conceived of for this purpose, for it fulfills all the requirements, that are made of such material. It is strong enough to withstand any blows it may receive and at the same time is hard enough to resist the wear to which it may be subjected, better than any known granite or syenite. It does not become smooth and slippery under continual wear as paving blocks consisting of only one mineral or as very fine-grained constituents are known to do.

## BAUXITE.

This important mineral, or ore, is found in Arkansas in the neighborhood of the granites and in the tertiary areas. It has been found in Saline and Pulaski Counties, and covers a known area of 640 acres.

The following is a copy of the special report of State Geologist Branner to the Governor, and one of the most important ever made:

### THE REPORT.

GEOLOGICAL SURVEY OF ARKANSAS,  
LITTLE ROCK, ARK., Jan. 7, 1891. }

*To his Excellency, J. P. Eagle, Governor:*

SIR—The field work of the geological survey having been suspended, the facts given below, which appear to be of more than usual importance, are made known without waiting for the complete report, in which they will be treated in detail. This brief preliminary statement refers only to the survey's work upon kaolin and kindred deposits. Most of it relates to the bauxite deposits, but inasmuch as frequent inquiries are made for kaolin, and as the survey does not feel at liberty to give information regarding any of these matters prior to its publication, a word of general information is added regarding our kaolin beds.

### BAUXITE DEPOSITS.

It is found that we have in Arkansas, in Saline and Pulaski Counties, a mineral that is used in the manufacture of aluminum, a metal of great and rapidly increasing importance, as well as for other useful purposes. This is the mineral bauxite (bozite), sometimes called "honey-comb rock," through the region in which it occurs in this State.

Bauxite is not a common mineral in any part of the world, and as it has a spongy earthy appearance, and is very light, there is nothing about it to attract the attention, and this is probably the reason it has been so long overlooked. In order that there may be no mistake about its identity, samples of the common varieties have been deposited with the Commissioner of Agriculture in the Statehouse.

In some places bauxite has been prospected upon with a view to using it as an iron ore; in others, so little has been thought of it that it has been quarried and used for building roads. In most cases the exact thickness of the deposits has not been determined, but in general, it varies from a few feet to over forty feet in thickness; it is thought safe to place its average thickness at about fifteen feet. Like all bauxite, it varies considerably in composition, and, in a general way, its value depends upon its having a high percentage of alumina, and low percentage of iron and silica. A few of the analyses made by the survey are therefore given. In order that some opinion may be formed of its value, I give briefly the most important uses to which bauxite is or may be put. Bauxite is available for the following purposes:

1. The manufacture of aluminum.
2. The manufacture of the highest grades of refractory materials, and for increasing the refractoriness of fire clays.
3. The manufacture of the highest grades of alum and aluminate of soda used in dyeing and calico printing.

The studies made by the geological survey of the occurrence of this mineral in Arkansas and in other parts of the world lead to the following general conclusions, which may be of value in judging of the importance of these discoveries, and in seeking deposits other than those mentioned in the list below:

I. Bauxite occurs in Arkansas only in tertiary areas and in the neighborhood of eruptive rocks (granites).  
 II. Inasmuch as sedimentary beds overlie or have overlain the bauxite, it is probable that there are deposits in the vicinity of our eruptive rocks not yet uncovered by the natural process of erosion.

III. It occurs in irregular deposits whose thickness and extent are determinable only by direct methods of examination.

VI. In the Little Rock region it has thus far been found only at and below the elevation of 300 feet above tide level.

V. The Arkansas bauxite beds are known to cover a total area of about 640 acres in Saline and Pulaski Counties.

VI. All bauxites vary considerable in color, character, composition and value.

VII. Although some varieties contain a high percentage of iron, none of them have any value as iron ores. (This is the pisolitic iron ore).

VIII. With the exception of a single bed in Georgia, the Arkansas deposits of bauxites are the only ones thus far discovered in the United States, and such deposits are nowhere abundant, so far as is now known.

Below is a list of the lands upon which bauxite has been found by the geological survey. This list does not purport to be complete, for there are doubtless deposits in Saline and Pulaski Counties other than those mentioned. The survey has had so much to do that it has not been possible to locate all the occurrences.

## THE LITTLE ROCK REGION.

### IN TOWNSHIP 1 NORTH, RANGE 12 WEST.

Section 24. It occurs on the northeast quarter, at the middle of the south side of this section. The bed is cut by the Little Rock Sweet Home turnpike near the south base of Fourche Mountain and the bauxite has been used in building the pike. The following is an analysis of a sample from this locality:

Silica.....	10.13 per cent.
Alumina .....	55.59 per cent.
Iron (ferric) oxide.....	6.08 per cent.
Water .....	28.99 per cent.

In this same section it covers a large part of the southeast half of the forty acre tract upon which Hon. C. C. Bliss' house stands.

Section 25. It is exposed on the middle of the west side of the northeast quarter, in the edge of the field west of the Confederate Home. From this point the deposit seems to extend southwest by west, along the foot of the granite ridge.

A well dug on lot 11 in the village of Ridgewood passed through seven feet of bauxite.

It occurs also at the southwest corner of section 25. It occurs again an eighth of a mile due south of the center of section 25, near the road and in the field to the northwest of this point. Due southwest from the center of section 25, and less than a quarter of a mile away, it outcrops in the top of a hill, and is exposed at several places around its summit.

Section 26. At the middle of the north side of this section, principally in the northeast of the northwest, and also extending into the section just north of it there is another deposit.

Section 36. On the northwest corner of this section bauxite is exposed about the brow of the hill west of Mr. Tarplay's.

An average sample from this locality gave the following upon analysis:

Silica .....	11.48 per cent.
Alumina .....	37.62 per cent.
Iron (ferric) oxide.....	1.83 per cent.
Water .....	28.63 per cent.

#### IN TOWNSHIP 1 SOUTH, RANGE 12 WEST.

There are two exposures on the southwest of the southwest of section 4, near the turnpike. One of them is on the summit of the little hill 100 feet west of the pike, just half a mile north of its southern end; the other is about 600 feet south of the first, on the west side of the road, and less than thirty feet from it. In section 5, near the center of the southeast quarter of the southwest quarter, it is exposed. Again on the south half of the southeast quarter of section 5 on the hill east of Littlejohn's.

Four exposures are known on section 9, as follows: First, at the center of the west side of the northeast quarter, just north of where the "middle Pine Bluff road" joins the turnpike. The beds here are over twenty feet thick. Second, about fifty feet west of the junction of the pike with the Pine Bluff road. Third, west of the Pine Bluff road on the southeast of the southwest. Fourth, west of the Pine Bluff road in the northeast of the southwest.

#### THE MABELVALE REGION.

The deposits known as the Mabelvale region are all in township 1 south, range 13 west, as follows:

On section 2, in the southwest of the southeast. This is near the line between sections 2 and 11.

On section 10, east of the house of J. W. Hopkins, on the east half of the northwest quarter, and also on the northeast of the northeast quarter. The road running east, southeast from Mabelvale, passes over the latter deposits about half a mile from the railway station.

On section 11 the deposit mentioned as occurring on section 2 seems to extend into section 11 for a short distance.

On section 12 it occurs on the southeast quarter of the northwest quarter.

#### THE SALINE COUNTY REGION.

The exposures in the Saline County area are all, so far as they are now known, in township 2 south, range 14 west, as follows:

On section 1 a very ferruginous variety occurs on the northwest quarter. This deposit lies along the line between sections 1 and 2, and it may extend into the latter section.

On section 2 about half a mile north of where the Camden and Little Rock road crosses Hurricane Creek is a ferruginous deposit of bauxite. There is some doubt about the exact location of this bed.

On section 3 it occurs on the southeast of the southwest, where it has been opened up for iron ore. Two samples from this locality have the following composition:

##### BLACK VARIETY.

Silica.....	5.11 per cent.
Alumina.....	55.89 per cent.
Iron (ferric) oxide.....	19.45 per cent.
Water.....	17.39 per cent.

##### RED VARIETY.

Silica.....	4.89 per cent.
Alumina.....	46.44 per cent.
Iron (ferric) oxide.....	22.15 per cent.
Water.....	26.68 per cent.

On sections 9 and 10 the deposits are red, brown and cream colored. They lie on the southwest of the southwest of 10 and extend into the southeast corner of 9. It has been opened up for iron. A sample of the red variety from section 9 was analyzed with the following result.

Silica .....	3.34 per cent.
Alumina.....	58.60 per cent.
Iron (ferric) oxide.....	9.11 per cent.
Water .....	28.63 per cent.



On section 14 it is exposed on the northeast quarter and it appears to form a continuous deposit running toward the southwest, and ending near the center of the section. It seems to have been struck also in digging a well on the northeast of the southwest of this section.

On section 15 the beds of section 10 seem to extend into the northwest quarter of section 15. See description of section 10.

On section 16 it covers a large part of the eastern half of this section, being in places, more than thirty feet thick.

On section 22 it occurs in the northwest of the southeast.

On section 23 it extends through the northern tier of forties, from near the middle of the northeast of the northeast to a little west of the northeast of the northwest. It occurs also on the southwest quarter of this section.

On section 25 it is found on the northeast of the northwest, a quarter of a mile south of J. Childress' house.

### KAOLIN DEPOSITS.

Kaolin is known to occur in Pike, Pulaski, Saline and Ouachita Counties. The Pike County beds are on Vaughan's Creek, in township 8 south, range 24 west, section 19. So far as these beds have been prospected they are too thin (two feet) and too much stained with iron to have any value, but their geological and topographic position leads to the belief that they may be found thicker and under a protective covering that will render them valuable. The samples exhibited in the agricultural department and labeled "Pulaski County" are from Pike County. Kaolin of this particular kind is not known in this State outside of Pike County. Analysis of Pike County kaolin:

Silica.....	48.87 per cent.
Alumina .....	36.54 per cent.
Iron (ferric) oxide .....	0.98 per cent.
Lime .....	0.19 per cent.
Magnesia .....	0.25 per cent.
Water .....	13.29 per cent.
<hr/>	
100.09 per cent.	

The Pulaski County kaolin is either modified bauxite or decayed granite. The localities of the bauxites have already been given. Other kaolin deposits occur in several localities in the vicinity of Fourche Mountain and Saline County granites, in 1 north, 12 west, 1 south, 12 west, and 2 south, 14 west. There are several localities in section 9, 1 south, 12 west: The following is an analysis of a sample of kaolin from section 9, 1 south, 12 west:

Silica.....	46.27 per cent.
Alumina .....	38.57 per cent.
Iron (ferric) oxide.....	1.36 per cent.
Lime .....	0.34 per cent.
Magnesia.....	0.25 per cent.
Potash .....	0.23 per cent.
Soda .....	0.37 per cent.
Water .....	13.61 per cent.
<hr/>	
101.00 per cent.	

The Ouachita County kaolin deposits form regular beds interstratified with other tertiary rocks. One important bed has been examined in township 12 south, range 18 west, section 2, which has a thickness of more than 12 feet, the entire thickness not having been seen. The outcrop of this bed is exposed at but few places, but it is probably several miles in length.

The true nature of this material would hardly be suspected from its general appearance, or from an analysis of it as it comes from the ground, for it resembles a sandy clay. If the sand be washed out and the material analyzed it is found to have the same composition as some of the best kaolins. The following is an analysis of the Ouachita County kaolin after the greater part of the sand has been removed. An analysis of a washed sample of Pennsylvania kaolin from Brandywine Summit is given for comparison:

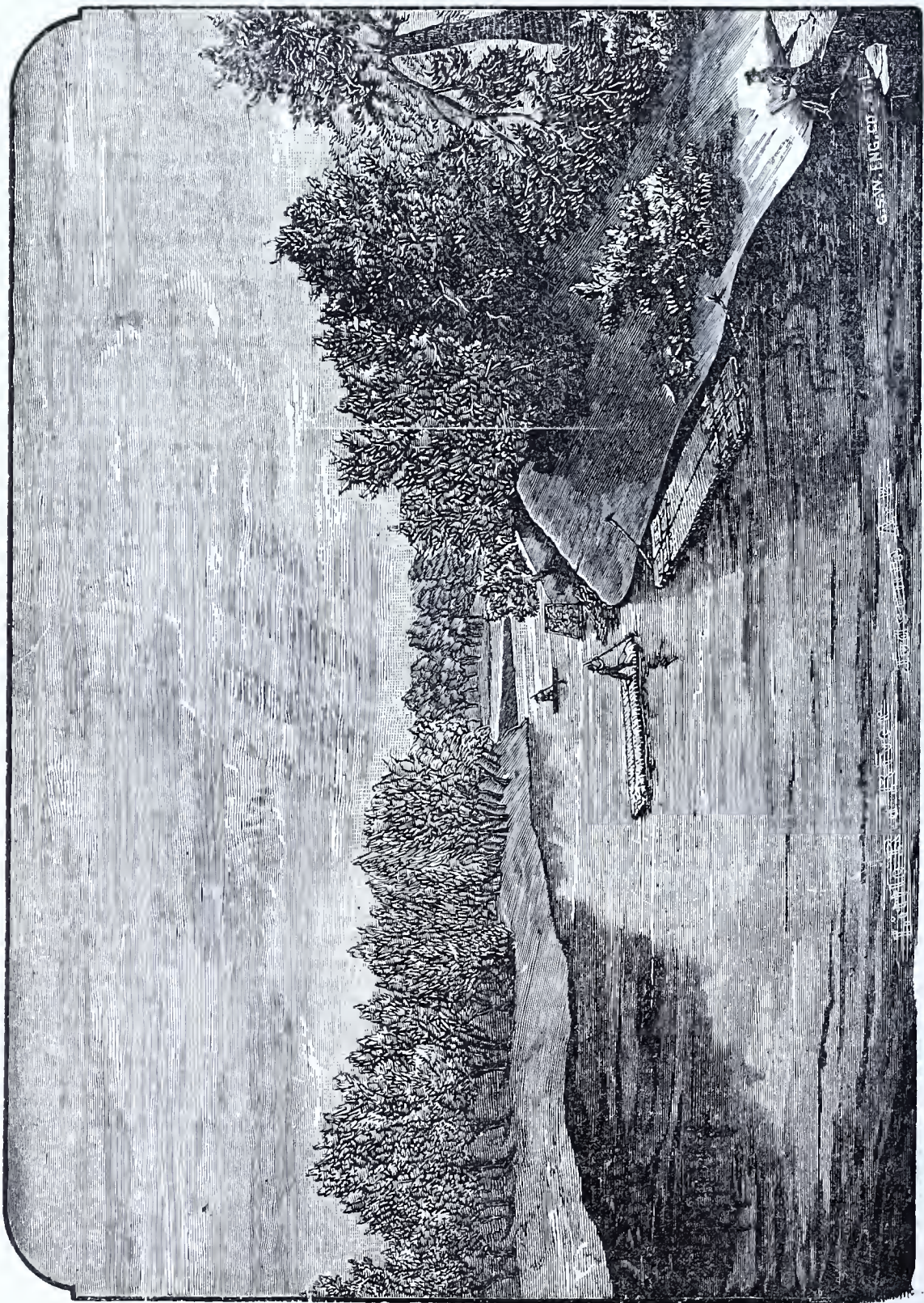
OUACHITA COUNTY KAOLIN.	
Silica .....	48.62
Iron (ferric) oxide.....	1.74
Alumina .....	36.52
Water .....	13.40

PENNSYLVANIA KAOLIN.	
Silica .....	47.24
Iron (ferric) oxide.....	1.94
Alumina .....	37.27
Water .....	13.62

I have the honor to remain, your excellency's obedient servant,

JOHN C. BRANNER, State Geologist.





LITTLE RED RIVER AT JUDSONIA.



## WHETSTONES, OILSTONES AND SCYTHESTONES.

The sources of supply of siliceous rock in the United States used for sharpening edged tools have been the same for some years. Arkansas, Indiana and New Hampshire furnish the bulk of the supply, and a small quantity is produced in Vermont. The Arkansas stone is found in the neighborhood of Hot Springs, and is supposed to have been formed by the action of hot water upon the quartz formations. It is found in two varieties, known as "Arkansas" and "Washita" stone, the grains in the former being smaller and more compact, of a uniform bluish-white color, and semi-transparent, while the Washita stone is more opaque and of a pure white color. In Indiana two varieties also occur, known commercially as "Hindustan" and "Orange" stone, the former being white in color and the latter of a buff or orange tint. The quarries are all located in Orange County. The quarries in New Hampshire are located in Grafton County, and the product consists of "rift sandstone" and "chocolate" whetstone. The Vermont quarries are located in Orleans County, and the product is used exclusively for scythestones. Some "Labrador" oilstones have in the past been produced at Manlius, Onondaga County, New York, but the factory is now used for the manufacture of oilstones from Arkansas and Washita stone.

The product of the different kinds of sharpening stones in 1889 consisted of 456 tons of scythestone, 1,500 tons of rift sandstone, 30,000 pounds of orange stone, 1,036,000 pounds of Washita oilstone, 175,000 pounds of Arkansas oilstone, and 200,179 pounds of Hindostan oilstone. The production by States is shown in the following table, and for the sake of convenience the quantity is expressed in short tons, the weight and value being given for rough stone:

### PRODUCTION OF SHARPENING STONES IN THE UNITED STATES FOR 1889 BY STATES.

STATES.	Quantity (Short tons.)	Value.
Total.....	2,991	\$ 32,980
Arkansas.....	814	20,360
Indiana.....	212	7,670
New Hampshire.....	1,515	3,750
Vermont.....	450	1,200

### OPERATING EXPENSES IN PRODUCING WHETSTONES.

STATES.	Total Expenditures	Wages.
Total.....	\$ 23,804	\$ 21,911
Arkansas.....	11,875	11,060
Indiana.....	7,148	6,763
New Hampshire and Vermont.....	4,781	4,088

### CAPITAL INVESTED.

STATES.	Total.	In land.	In buildings, machinery, etc.	In tools, implements, live stock, etc.	In cash.
Total.....	\$ 57,510	\$ 42,500	\$ 3,925	\$ 6,885	\$ 4,200
Arkansas.....	20,825	18,000	625	700	1,500
Indiana.....	9,225	4,700	700	1,825	2,000
New Hampshire and Vermont.....	27,460	19,800	2,600	4,360	700



## OILSTONE.

BY J. J. SUTTON, HOT SPRINGS.

Washita oilstone and Arkansas oilstone are both found in the same vicinity in the foothills of the Ozark Mountains in several counties in Arkansas, and the center of the location and best quality of both kinds is near the City of Hot Springs. The peculiar geological formation of this section is not known to exist elsewhere in the world.

These mountains are from 500 to 1,000 feet high and mostly in long parallel narrow ranges with wide valleys between. The strata in this region are mostly vertical with some variations in the dip, and all of the rocks have been considerably broken in the folding or elevation of the mountains. The rocks in the valleys are usually shale and on the mountain summits are quartzite, a bluish gray in color, dense and vitreous, and hard sandstone, while near the base are leads of silica rocks from 200 to 400 feet wide with various grades of hardness, color, density and purity, from black and red flint to the softest snow white and porous rock which is used for whetstones.

The whetstone grit is in narrow leads usually from four to fifteen feet wide running through a few only of these large silica formations, vertically with a variable inward dip, and it is found only in pockets in these leads where the location has been favorable to influences which have made it porous and uniform in its crystalization. There are known to be more than 500 miles of leads of hard and flinty silica rocks with numerous places where surface stones are gritty and some used locally, but the good whetstone grades of commercial value in solid ledges have been found only in two townships in Garland County, within ten miles of Hot Springs.

There are two varieties of our oilstone rocks used for whetstones and they are commercially known as Washita oilstone and Arkansas oilstone. The Washita is used by carpenters and all mechanics who use tools in wood work, and the Arkansas mostly by watchmakers, dentists and surgeons. The demand is greatest for the Washita and about twenty times as much of that is sold as of the Arkansas. They are alike in composition, both being nearly pure silica, crystalized in small grains in a manner that has made many cavities, but the Washita is the most porous and has the sharpest grit. The crystals are hexagonal with sharp pointed ends and so small that they are invisible to the naked eye, but can be distinctly seen in a microscope when magnified about one hundred times. They are harder than steel and that is the reason why Washita stones will quickly wear away and sharpen steel tools. These stones are called oilstones because oil must be used on them to fill the cavities and float away the steel particles that are cut from the tools. The Washita rock is about three times as hard as marble and it is cut in the same manner, with saws of band iron and wet sand.

The sharpness of the grit in any Washita oilstone depends upon the purity of its silica combined with the character of its crystalization and number of cavities. The best grades of this rock give in a chemical analysis 99 to 99½ per cent of silica and the microscope reveals in them only crystals with many cavities. There are only a few quarries as good, but nearly all, even in the best leads, contain some impurities or defects. Many Washita stones that appear good contain a small percentage of alumina which remain to clog the cavities when they wear away by use. Some contain hard spots and such will soon wear uneven, others contain many grains of sand among the crystals and they soon glaze when used, while many do not have enough cavities, but are too compact and almost solid like glass. There are leads of black Washita stone and black spots which contain carbon in

several quarries which are good otherwise, but they are always too hard and are not quarried. The best Washita stones are white, but not all of the white stones are good, while some of a light rosy red color have sharp grit and are good when of even texture.

Several doubtful theories were formerly advanced by geologists on the formation of our oilstone rocks and the reason for their having very sharp grit, but to Dr. Branner and his able assistant, Mr. Leon S. Griswold, we credit the recent discovery that the cavities estimated by them at more than 8,000,000 to the cubic inch in the best quality are rhombic in form, with sharp edge corners which greatly assist the crystal grains in cutting. They also advanced the theory that our silica rocks and others were originally deposited in an ocean bed; that our mountains were elevated to their present vertical position by folding, and that the cavities were made by calcites or crystals of lime which were formed in the original rock and dissolved by a long continued leaching of water percolating through them.

It is a fact well understood by many oilstone quarrymen that the good leads are not found in the valleys, nor on the mountain tops, but are always situated near the base of a mountain, and the quarries of the porous rocks are always located where the rainwater from the summit and side runs across them. Every good oilstone quarry has a long mountain slope back of it and drainage through the strata below, and the depth of the good rock seems to depend upon the depth of the drainage.

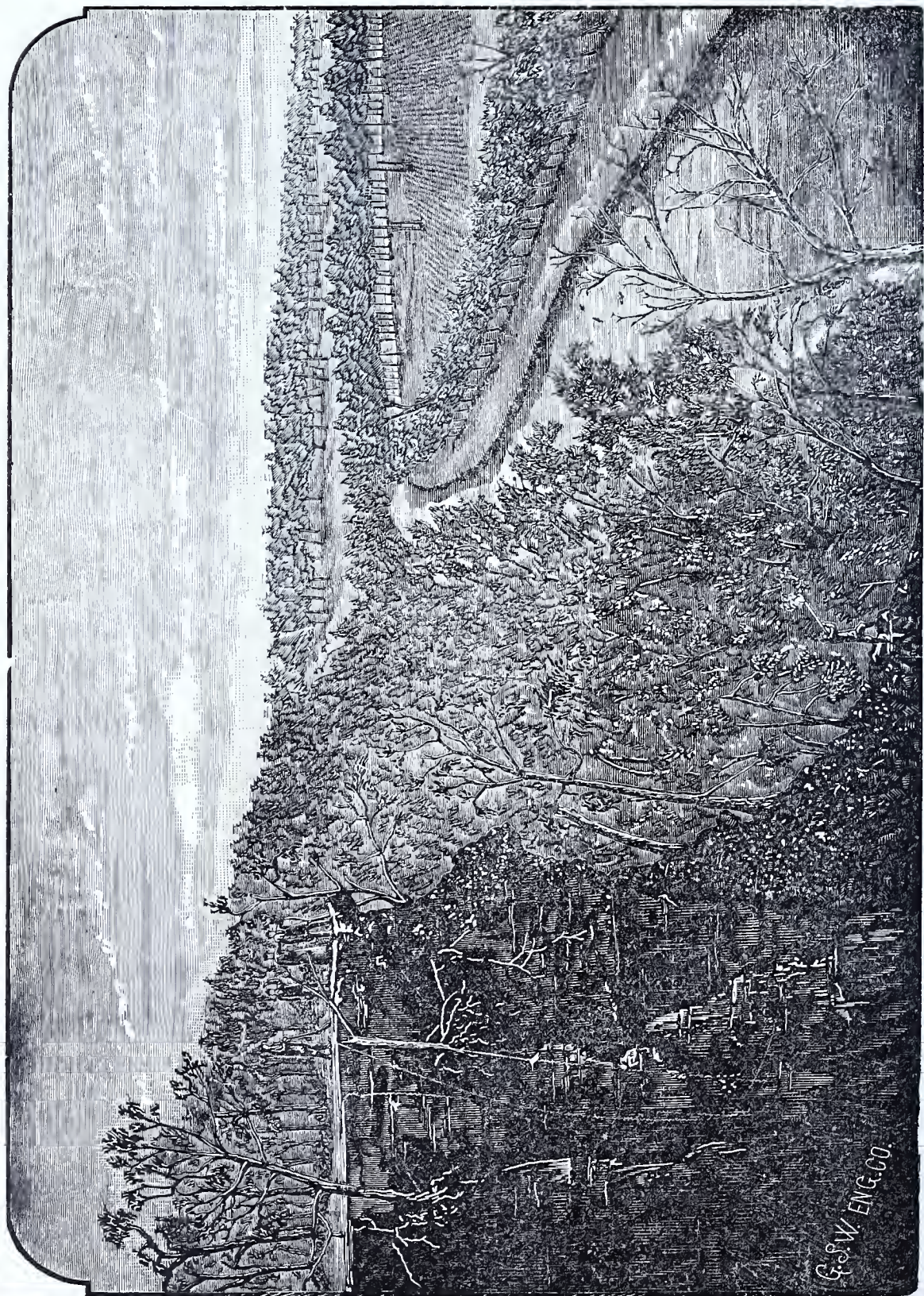
The foot wall to most of the leads is very hard and much fractured but in close seams so that most of the water runs over that or through it near the surface, while below several deep quarries is a strata of sand which is about fifteen inches thick, and one of blue clay two inches thick very rich in aluminum. Hundreds of Washita quarries have been opened, but most of them were not good more than ten feet deep, and less than a dozen were good down to twenty-five feet, while not half of that number have proved good below fifty feet.

Applying Dr. Branner's theory, I understand that the original rock was formed in level strata on a deep sea bed and when elevated into mountains by folding, the strata were changed to a vertical position and much broken; that it contained many calcites and some aluminum and it was then crystalized but compact; that it was metamorphosed while in its present position in many places, by the removal of the calcites and aluminum which has made it porous and pure silica as we find it; that rainwater was an active agent in dissolving and removing them by a slow filtration; that in deep quarries the aluminum was deposited in the cleavage seams and clay strata while the calcites were dissolved and the lime passed away in solution through the sand strata; that where there is no flow of surface water the calcites remain as in the original rock; and where there is a flow of water and no sand strata, but a close foot wall below the leads, the rock near the surface may be porous and have grit, but in a few feet of depth it is hard and vitreous with no grit.

In all tests by analysis, weighings of wet and dry samples and actual use of whetstones, the rock from the deepest quarries situated above a sand and clay strata are the purest in silica, the most porous and uniform in crystalization and the sharpest grit, and though many quarries have been worked out and abandoned, there is fortunately plenty of the best grade of this rock for the demands of trade many years to come.

The reputation of Washita stone has been damaged some in recent years by the sale of poor grades on the markets, but most carpenters know that a good Washita oilstone is the best whetstone in the world. They are sold in all civilized countries and the rock is all quarried in Arkansas.





BEE ROCK, NEAR SEARCY.



## BLUESTONE.

Johnson County abounds in this species of sandstone and the quarries at Cabin Creek furnish large quantities of stone which are shipped to Little Rock principally, where they are used for flagging, rubble masonry, retaining walls and bridge stones, sidewalks, crosswalks, curbing, gutters, stepstones, flooring, vault covers, bases of tombstones, porch and hitching posts, well covers and house trimmings. Bluestone is also found in Pulaski County and in other parts of the State. It is now a valuable industry and the demand for this stone increases each year. Some of the most handsome foundations in Little Rock are made with this stone.

## SANDSTONE.

The whole western side of Arkansas is underlaid with metamorphosed sandstone and quarries have been opened in Washington, Carroll, Crawford, Sebastian, Johnson, Pulaski and Independence Counties for commercial purposes. It is used for all purposes for which bluestone is used. It has many colors and is growing in popularity. The Batesville variety has a great reputation. Arkansas stood twenty-fourth in rank for actual production in 1890, having produced an output valued at \$25,074. When it is known that in 1880 this interest had not been developed its importance will be appreciated. Eight quarries are in successful operation.

Of the 210,000 cubic feet quarried in 1889, 139,000 feet were used for building purposes; 27,160 feet for street work, and 42,900 feet for bridge, railroad and miscellaneous purposes. Arkansas ranked twenty-seventh in the value of her sandstone for building purposes; ninth for street purposes, and fourth for miscellaneous purposes. She ranked twenty-fifth as to cubic feet used for building purposes, eleventh for street purposes and sixth for miscellaneous purposes. The average yearly earning of laborers is greater in Arkansas than in Arizona, Illinois, Indiana, New Hampshire, Kentucky, Maryland, New Mexico, Tennessee, Texas, South Dakota, Virginia, West Virginia and several other States.

The following additional items will show particulars not pointed out before which are of great value to the estimate placed upon this industry.

Total number of cubic feet quarried.....	210,010.
Total value of product.....	\$25,074.
Total wages.....	11,287.
Total expense.....	12,860.
Total capital.....	17,660.
Per cent profit on capital.....	69.16.
Per cent profit on value of product.....	48.71.
Cost per cubic foot of production.....	.06.
Percentage of wages to total expense.....	87.77.
Wages paid per cubic foot.....	.05.
Percentage of wages to total value.....	45.01.
Value per cubic foot.....	.12.

## MANGANESE.

The census of 1890 contains this language: "By far the larger proportion of manganese in the United States is mined in three localities — Cremora, Virginia; Cartersville, Georgia; and Batesville (Independence County), Arkansas." Of the 23,927 tons of manganese produced in the census year, 20,325 tons were from these three districts. The following is the exact production:



## PRODUCTION OF MANGANESE ORES IN THE UNITED STATES IN 1889.

STATES.	Production.	Total Value.	Value Per Ton.	Employees.	Wages.	Capital.
Total .....	23,926	\$238,939	\$9.99	432	\$123,858	\$2,094,475
Arkansas .....	2,528	23,173	9.17	96	33,191	120,000
California .....	53	901	17.00	10	1,149	2,400
Georgia .....	5,208	50,143	9.63	117	19,486	175,125
Nevada .....	15	83	5.53	2	53	600
North Carolina .....	17	170	10.00	2	60	250
South Carolina .....	124	744	6.00	6	400	5,000
Tennessee .....	30	120	4.00	3	70	100
Vermont .....	1,336	7,348	5.50	25	3,510	
Virginia .....	14,616	156,257	10.69	171	65,939	711,000

Arkansas ranks third in the production of this important mineral, and is rapidly increasing its production. The mining is continuous throughout the year. Besides the Batesville district the region around Little Rock in Pulaski and Saline Counties, and further to the southwest in Polk County abounds in manganese. No systematic mining efforts have been begun, and the value and quantity of the ore in this region is still unknown. The following table will show the growth of this industry since its beginning in Arkansas:

## PRODUCTION OF MANGANESE ORES IN THE UNITED STATES.

STATES.	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889
Total .....	5,761	4,895	4,532	6,155	10,180	23,258	30,193	34,524	29,198	23,927
Virginia .....	3,661	3,295	2,982	5,355	8,980	18,745	20,567	19,835	17,646	14,616
Arkansas .....		100	175	400	800	1,483	3,316	5,651	4,312	2,528
Georgia .....	1,800	1,200	1,000			2,580	6,041	9,024	5,568	5,208
Other States .....	300	300	375	400	400	450	269	14	1,672	1,575

## IRON DEPOSITS OF ARKANSAS.

BY R. A. F. PENROSE, JR., ASSISTANT GEOLOGIST ARKANSAS GEOLOGICAL SURVEY.

The history of iron mining and manufacture in Arkansas is told in a few words. At the present time (1892) no iron ore is being mined and no iron is being manufactured in the State. Two small bloomaries were operated in the northern part of the State for short periods before 1860, and the limited products of those works represent all the iron ever manufactured in Arkansas. Besides the small quantities of ore taken from local deposits to supply these bloomaries, no iron ore has been mined in the State except in prospecting. Prospecting, however, has been done in many places, and the numerous small openings wherever iron ore has been discovered attest to the endeavors that have been made to find it in quantities.

The two bloomaries already referred to were known as the Bevens Bloomary and the Beach Iron Works, and were situated respectively in the northeastern and northwestern parts of the State. They were both operated for only short periods of a few years at the most, and both had already been abandoned in 1860. They were built to supply a purely local demand, and the conditions that permitted their existence were the lack of transportation facilities, there being at that time no railways in the northern part of the State, and the consequent difficulty of obtaining iron from outside sources. They attained their purpose

in this respect, and supplied a serviceable iron for agricultural implements, wagon tires, and other such articles. The abandonment of the bloomaries in both cases is said to have been caused by the limited market for the iron, as there were only sparsely settled country districts to supply. To this cause also may probably be added the inexperience of the operators of the bloomaries.

Though the only two iron-producing works ever erected in Arkansas were thus brought to an early end, yet the improved transportation facilities a few years later and the resulting influx of cheap iron and cheap farming implements would probably have caused their abandonment even if they had previously been profitably operated. Whatever success they may have attained depended upon their protection against outside iron, and this protection was due to the comparative inaccessibility of the region at that time; but when the protection was removed by the introduction of transportation facilities, their small capacity, crude methods, and, in the case of the Beach Iron Works, the scarcity and poor quality of the ore, would inevitably have caused their abandonment.

The Bevens Bloomary was situated on Big Creek in the southeastern part of Sharp County, six miles southwest of Smithville, in 16 N., 4 W., the east half of section 24. It was built in 1857 by Alfred Bevens & Co., and was run for two or three years, when operations were stopped on account of the limited market for the iron produced. At the present time most of the bloomary has been swept away or covered with sand by the overflows of Big Creek. The ores for the bloomary were obtained from the local deposits in the neighborhood, in Sharp and Lawrence Counties.

Dr. D. D. Owen, in referring to the Bevens Bloomary after his visit there in 1857-58, says "it has two fires, and is driven by a good water power. When visited, this forge was undergoing thorough repairs, and preparations were being made to introduce the hot blast in place of the cold blast, formerly in use, by which alteration it was expected to increase the amount of swaged bar iron manufactured from 500 to 1,600 pounds per day." Prof. J. P. Lesley, however, in speaking of the Bevens Bloomary somewhat later (1859), says "it was built in 1857 with two fires and one hammer driven by water, and makes 250 pounds of swedged iron per day with cold blast, out of brown hematite ore."

The Beach Iron Works consisted of a bloomary and were situated in the central part of Carroll County, on the east side of Osage Creek, less than a mile above its confluence with King's River. It is said to have been erected in 1850 or soon thereafter, and to have been abandoned before 1860, in which year it was destroyed by a freshet. Full records concerning it are at present unobtainable. It was built by an Englishman named Abram Beach, and it is said by some to have been worked for several years; by others, for only a few months. At any rate, it was run on only a small scale and for a short time. Like the Bevens Bloomary, it was built to supply a local demand, and, as in case of the latter, the cause that permitted its existence and operation was the difficulty of obtaining iron from outside sources. The ore for the Beach Bloomary was obtained from the local deposits of Carroll County, in the vicinity of Berryville.

#### DISTRIBUTION OF IRON ORE IN ARKANSAS.

Iron ore is of common occurrence throughout many parts of Arkansas, but in only a few places is it found in important quantities. The largest and most accessible deposits yet discovered are in the northeastern part of the State, especially in Lawrence and Sharp, and to a lesser extent in Fulton and Randolph Counties. Other deposits, however, of varying size and importance occur in many places in the part of the State west and north of the line of the St. Louis and Southwestern Railway ("Cotton Belt Route").



# IRON ORE LOCALITIES IN ARKANSAS.

Number.	LOCALITY.	Iron.	Silica.	Phosphorus.	Sulphur.	Manganese.	ANALYZED BY
	NORTHEASTERN ARKANSAS.						
	LAWRENCE COUNTY.						
1	Coffman tract, 17 N., 1 W., Sec. 17, S. 1/2 S. E.	55.75	5.20	0.041	0.212	A little	A. E. Menke.
2	Holloway tract, No. 1, 16 N., 2 W., Sec. 6, S. E.	53.91	7.08	0.028	0.198	"	" "
3	" " No. 2, 17 N., 3 W., Sec. 35, N. E., S. E.	45.49	8.47	0.007	0.315	"	" "
4	Cazort tract, 16 N., 2 W., Sec. 6, N. W., S. W.	41.71	28.26	0.014	0.232	"	" "
5	Holloway & Collins tract, No. 1, 16 N., 3 W., Sec. 12, S. E.	49.44	25.85	0.028	0.479	"	" "
6	" " No. 2, 16 N., 3 W., Sec. 12, W. 1/2, W. 1/2	47.99	15.08	0.083	0.054	"	" "
7	Wasson tract, No. 1, 17 N., 3 W., Sec. 26, S. 1/2	41.58	16.26	0.093	0.095	"	" "
8	Sloan tract, 17 N., 3 W., Sec. 28, W. 1/2, N. E.	40.10	12.54	0.042	0.637	"	" "
9	Strawberry or Cathaytown, 16 N., 3 W., Sec. 12, S. E.	36.30	30.87	0.041	0.205	None	" "
10	" " " " " " " " " " " "	27.35	52.58	0.284	0.034	"	" "
	SHARP COUNTY.						
11	Collins tract, 16 N., 4 W., Sec. 8, S. W.	58.91	2.46	0.083	0.101	Trace	" "
12	Wasson tract, No. 2, 16 N., 4 W., Sec. 13, E. 1/2, S. E.	54.70	2.80	0.021	0.458	None	" "
13	Big Creek & Reed's Creek divide, 16 N., 4 W., Sec. 36, N. 1/2	23.67	58.12	0.306	0.178	"	" "
	FULTON COUNTY.						
14	Deadrick tract, 20 N., 6 W., Sec. 1	44.97	21.40	0.031	0.109	"	" "
	RANDOLPH COUNTY.						
15	Near Ravenden Springs	50.49	12.60	0.041	0.102	A little	" "
16	Odom tract, 18 N., 1 W., Sec. 18, N. E., N. E.	44.44	11.83	0.021	0.157	"	" "
17	Iron Bank, 21 N., 3 W., Sec. 8, N. E., S. W.	49.97	14.53	0.014	0.082	Trace	" "
	NORTHWESTERN ARKANSAS.						
	CARROLL COUNTY.						
18	Bobo tract, near Berryville	47.33	5.36	0.028	0.287	A little	" "
19	Mack Thomas tract, near Berryville	45.01	6.82	0.035	0.301	"	" "
20	Brooks tract, near Berryville	21.96	50.42	0.290	4.486	None	" "
	WASHINGTON COUNTY.						
21	Near Tolu, 14 N., 33 W., Sec. 16, N. W.	13.62	60.80	0.046	.403		R. N. Brackett.
	ARKANSAS VALLEY.						
	VAN BUREN COUNTY.						
22	McGruder tract, near Choctaw	24.40	40.44	0.276	0.178	A little	A. E. Menke.
23	Lick Mountain, near Choctaw	20.98	13.78	0.524	0.123	"	" "
	POPE COUNTY.						
24	Guest tract, near Russellville	24.40	46.36	0.242	0.164	Trace	" "
25	Bowden tract, 8 N., 19 W., Sec. 17, N. E., N. E.	38.55	18.42	0.262	0.054	None	" "
26	Barton tract, 8 N., 19 W.	17.56	63.64	0.312	0.178	Trace	" "
	LOGAN COUNTY.						
27	Freeman's Gap, near Paris	19.76	36.32	0.241	0.137	None	" "
	SEBASTIAN COUNTY.						
28	Wild Cat Mountain, near Fort Smith	17.81	10.84	0.414	0.411	A little	" "
	SCOTT COUNTY.						
29	"Near Mansfield," 4 N., 30 W., Sec. 6	14.15	51.50	0.286	0.049	None	" "
	CRAWFORD COUNTY.						
30	Shay tract, near Lancaster	17.08	40.30	0.274	0.260	A little	" "
31	Near Chester	15.37	42.54	0.184	0.054	"	" "
32	Basham tract, near Chester	28.30	37.22	0.252	0.123	"	" "

IRON ORE LOCALITIES IN ARKANSAS — CONTINUED.

Number.	LOCALITY.	Iron.	Silica.	Phosphorus.	Sulphur.	Manganese.	ANALYZED BY
OUACHITA MOUNTAINS.							
PULASKI COUNTY.							
33	Capitol L. & M. Co. tract, 1 N., 14 W., Sec. 24, N. E. ..	33.80	44.91	0.160	.....	0.39	R. N. Brackett.
34	“ “ “ “ “ “ S.E., N.W	11.82	63.19	0.270	.....	8.08	“ “
35	Whitemore & Bunch tract, 1 N., 14 W., Sec. 14, N.E., S.W	27.07	46.37	0.470	.....	1.62	“ “
36	R. W. Worthen tract, 1 N., 13 W., Sec. 19, S.W., S.W...	6.10	75.02	0.184	1.137	None	A. E. Menke.
37	“ “ “ “ “ “ 1 N., 14 W., Sec. 14, N.E., S.W...	53.42	22.48	0.500	.....	Trace	R. N. Brackett.
SALINE COUNTY (Northern Part).							
38	Iron Mountain, 2 N., 16 W., Sec. 18, S. E. ....	35.74	42.79	0.140	.....	A little	“ “
39	“ “	11.34	50.50	0.276	0.082	None	A. E. Menke.
GARLAND COUNTY.							
40	Rector & Roulston claim, No. 1, 4 S., 19 W., Sec. 3, S.E	57.54	2.96	0.670	.....	None	W. A. Noyes.
HOT SPRING COUNTY.							
41	Conley-Sullivan claim, 4 S., 20 W., Sec. 26, N.W., S. E.	14.15	1.29	0.560	.....	41.54	“ “
42	Magnet Cove, 3 S., 17 W., Sec. 20, S. W. ....	68.58	5.80	0.028	0.191	A little	A. E. Menke.
MONTGOMERY COUNTY							
43	Bud Jones' claim, No. 1, 3 S., 23 W., Sec. 22, S.E., N.E	61.99	1.53	0.200	.....	0.04	W. A. Noyes.
44	“ “ “ “ “ “ No. 3, 3 S., 23 W., Sec. 29, N. ½ .....	54.54	0.84	1.790	.....	0.30	“ “
POLK COUNTY.							
45	J. Guy Lewis' claim, 4 S., 28 W. ....	16.22	19.32	0.773	0.137	Trace	A. E. Menke.
46	Pointed Rock Tunnel, 4 S., 28 W., Sec. 19. ....	14.51	41.40	0.191	0.082	A little	“ “
47	Arkansas Development Co. claims .....	25.53	0.80	0.767	.....	40.51	St. L. S. & T. Wks.
48	“ “	35.39	1.88	0.230	.....	27.68	“ “ “ “
49	“ “	16.83	29.00	0.343	.....	26.20	“ “ “ “
50	“ “	22.26	44.40	0.576	.....	11.93	“ “ “ “
51	“ “	50.38	.....	1.450	.....	2.00	“ “ “ “
SOUTHERN ARKANSAS.							
SALINE COUNTY (Southern Part).							
52	R. W. Worthen tract, 3 S., 13 W., Sec. 6 .....	40.94	30.26	0.070	.....	Trace	R. N. Brackett.
53	“ “	22.57	2.96	0.193	0.548	A little	A. E. Menke.
54	Young tract, 2 S., 14 W., Sec. 33, N. E. ....	21.10	23.86	0.110	0.178	“	“ “
55	Frank Davis tract, 2 S., 14 W., Sec. 1 .....	20.98	2.12	0.262	0.452	Trace	“ “
56	Claiborne tract, 2 S., 14 W., Sec. 10 .....	14.34	3.46	0.124	0.274	A little	“ “
57	Wm. Herr tract, 2 S., 14 W., Sec. 3, E. ½, S. W. ....	21.96	6.68	0.317	0.041	“	“ “
DALLAS COUNTY.							
58	Griswold's Mill, 10 S., 16 W., Sec. 4 .....	30.67	40.48	0.704	.....	None	R. N. Brackett.
59	“ “	37.73	25.87	0.225	.....	Trace	“ “
OUACHITA COUNTY.							
60	Five Miles West of Camden, 12 S., 18 W. ....	26.15	52.16	0.588	.....	None	“ “
61	Wm. Brown tract, 12 S., 18 W. ....	35.68	35.95	0.280	.....	“	“ “
NEVADA COUNTY.							
62	Vicinity of Rosston, 13 S., 21 W. ....	57.17	4.27	0.225	.....	Trace	“ “
63	“ “	50.20	10.65	0.424	.....	“	“ “
64	“ “	38.80	26.57	0.119	.....	None	“ “
65	“ “	30.88	50.63	0.223	.....	“	“ “
66	“ “	22.08	58.73	0.085	.....	“	“ “
HEMPSTEAD COUNTY.							
67	Eight Miles North of New Lewisville. ....	26.47	52.10	0.201	.....	“	“ “
68	“ “	27.31	53.32	0.136	.....	“	“ “
LAFAYETTE COUNTY.							
69	Boyd Farm, near New Lewisville .....	38.13	26.78	0.139	.....	“	“ “
70	“ “	19.68	65.82	0.137	.....	“	“ “

The analyses in this table were made by the Chemists of the Survey, with the exception of Nos. 47-51 inclusive, which were made at the St. Louis Sampling and Testing Works, Prof. W. B. Potter, Manager, and which have been kindly furnished the Survey by Mr. W. E. Barnes, editor of the *Age of Steel*, St. Louis, Mo.





C. & W. ENG. CO.

WHITE RIVER AT NEWPORT.



## AGRICULTURAL MARLS AND CHALKS OF ARKANSAS.

The following extract from the Arkansas Geologic Survey shows the nature and extent of articles:

No region of the world is more plentifully and conveniently endowed with such valuable natural marls and chalks than Arkansas, nor is there any region which could be so greatly benefited by their use. We have here large areas of soil especially deficient in the very ingredients which are so plentifully stored up in our marls. Many farmers endeavor to cultivate soils which are pure commercial marls, in which there is entirely too much lime, as in some of the black land regions, while others cultivate land utterly deficient in lime, potash, etc., which might readily be supplied by using the natural marls. Large tracts like the prairies east of the Iron Mountain Railway, now lying idle, might be made the most fertile and profitable lands of the State.

The marls used most frequently throughout the world are of five general types, only one of which usually occurs in any single geographic area. These may be classified as follows:

1. *Phosphatic Marls*.—Those rich in phosphates, of rare occurrence and of great commercial value. Example, the tertiary marl beds of South Carolina.
2. *Greensand, or Glauconitic Marls*.—Those composed mostly of the mineral glauconite (a silicate of iron and potash) and sand. These are often comparatively poor in lime. Example, the marls of New Jersey.
3. *Lime, or Calcium Carbonate Marls*.—These marls are rich in lime as an essential, mixed with clay, greensand, or other accessory minerals. They form from 20 to 75 per cent of the material. Example, lime marls of England.
4. *Chalk Marls* are lime marls in which the calcium carbonate is so much in excess as to compose nearly the entire mass, usually over 85 per cent of the whole. Example, the chalks of England and France.
5. *Gypsum, or Sulphate of Lime Marls* are those in which the fertilizing element is the sulphate of lime. This fertilizer is usually spoken of as land plaster.

All these kinds of marls seldom, if ever, occur in the same formation or in close proximity to each other, but usually each occurs alone in widely separated regions. Thus it happens that the marls of South Carolina are of the highly phosphatic character; those of New Jersey mostly greensands or glauconitic; those of England and France, mostly lime and chalk, while gypsum occurs at other places. In view of these facts it is very remarkable that in Arkansas, within a small triangular area of thirty miles square between Washington and Murfreesboro and the White Cliffs of Little River we have abundant supplies of at least four of these valuable kinds of marl, greensand, lime, chalk and gypsum, with the reasonable expectation that another year's investigation would reveal the phosphates. These facts alone, if properly utilized, will be of greater value to the State than all the gold dug within the bounds of California has been to that State.

The marls of Arkansas may be classified according to their local distribution as follows:

## I. THE TERTIARY MARLS OF EASTERN ARKANSAS.

1. It has not been in the province of the writer's investigation to study the tertiary marls of Crowley's Ridge, and they are only mentioned here for purposes of comparison. As the value of marls is greatly dependent upon their convenience to the consumer, it is not necessarily derogatory to the local value of the tertiary marls of St. Francis and other counties to say that although valuable they are inferior to the cretaceous marls of the southwestern part of the State, possessing in general more sand and much less lime than the latter.

## II. THE CRETACEOUS MARLS OF SOUTHWEST ARKANSAS.

2. The upper cretaceous or greensand marls found in the geologic horizon of the Washington or High Bluff sands, in Clark and Hempstead Counties, and in the beds of Little River, at Morris' Ferry, in Little River County.
3. The middle upper cretaceous, or lime marls of the Big Deciper, *Gryphæa vesicularis* and *Exogyra ponderosa* horizons, varying in quantities of calcium carbonate and sand from 10 per cent of the former and 50 per cent of the latter as the geologic column is descended, to 75 per cent of the former to 10 per cent of the latter; and also varying in quantities of accessory clay and greensand. These marls occur in Clark and Hempstead Counties at the horizons mentioned.
4. The basal upper cretaceous or chalk marls of the White cliffs of Little River, containing more than 90 per cent of calcium carbonate and the Rocky Comfort chalk, containing more than 85 per cent of lime.
5. The Comanche series, *Gryphæa pitcheri* marls at and south of Cerro Gordo, containing a little gypsum and much clay.
6. The Trinity gypsum marls of Plaster Bluff and other points between Murfreesboro and Ultimathule, containing from 10 to 95 per cent of gypsum or sulphate of lime.

The greensand marl at Washington is especially convenient to railway transportation. If reasonable freight rates could be arranged, they should be freely used both on the plateau gravel or red lands, and on the Prairie d'Ane and Prairie de Roan clays and on the prairies of the eastern part of the State.



## COAL.

Total product in 1891, 542,379 short tons; spot value, \$647,560.

Compared with the product of 1890, the output in 1891 shows a gain of 142,491 tons and an increase of value of \$132,965. the product in the former year being 399,888 short tons, worth \$514,595. The increased product is due to the opening of new mines by the Kansas and Texas Coal Company, and more extensive operations by the Western Coal and Mining Company, the mines of both of which are located in Sebastian County. The output of the other two producing counties was not materially changed. The total number of men employed in 1891 was 1,317, who worked an average of 214 days, against 938 men for the same number of days in 1890. The increased production, however, was attended by a decline in the average price per ton, from \$1.29 in 1890 to \$1.19 in 1891.

## COAL PRODUCT OF ARKANSAS IN 1891, BY COUNTIES.

COUNTIES.	Loaded at mines for shipment.	Sold to local trade and used by employes.	Used at mines for steam and heat.	Total amount produced.	Total value.	Average price per ton.	Number of days active.	Average number employed.
	Short tons	Short tons	Short tons	Short tons				
Johnson .....	78,223	1,100	677	80,000	\$112,000	\$ 1.40	193	185
Pope.....	4,850	50	100	5,000	15,000	3.00	100	40
Sebastian.....	435,047	1,759	14,573	451,379	508,560	1.13	222	1,092
Small mines.....		6,000		6,000	12,000			
Total.....	518,120	8,900	15,350	542,379	\$647,560	\$ 1.19	214	1,317

## ANNUAL PRODUCTION OF COAL IN ARKANSAS FROM 1882 TO 1891.

YEARS.	Short tons.	YEARS.	Short tons.
1882.....	5,000	1887.....	129,600
1883.....	50,000	1888.....	276,871
1884.....	75,000	1889.....	279,584
1885.....	100,000	1890.....	399,888
1886.....	125,000	1891.....	542,379

## JOHNSON COUNTY.

The product in 1891 decreased 9,000 tons compared with 1890, the difference in value being \$18,927. The mines gave employment to 185 men in 1891 against 215 men the previous year. The coal is shipped from the collieries at Coal Hill over the Little Rock & Fort Smith Railroad. The annual product of this county since 1887 has been as follows:

## COAL PRODUCT OF JOHNSON COUNTY, ARKANSAS, SINCE 1887.

YEARS.	Short tons.	YEARS.	Short tons.
1887.....	71,900	1890.....	89,000
1888.....	106,037	1891.....	80,000
1889.....	105,998		

## POPE COUNTY.

The output in 1891 was 5,000 tons, valued at \$15,000, an increase of 1,000 tons over the product of 1890. The coal is classed as a semi-anthracite and is consumed chiefly in Little Rock and Fort Smith for domestic purposes, being shipped over the Little Rock & Fort Smith Railroad to those cities.

## COAL PRODUCT OF POPE COUNTY, ARKANSAS, SINCE 1887.

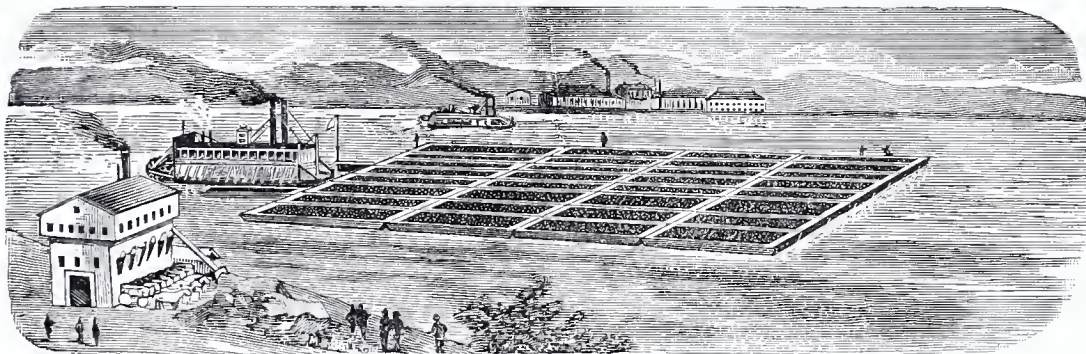
YEARS.	Short tons.	YEARS.	Short tons.
1887.....	8,200	1890.....	4,000
1888.....	10,240	1891.....	5,000
1889.....	6,014		

## SEBASTIAN COUNTY.

Sebastian County in 1891 produced 83 per cent of the total output of the State, with 451,379 short tons valued at \$508,560. The Kansas and Texas Coal Company, and the Western Coal and Mining Company, both of St. Louis, are the principal operators, the former shipping its product from Huntington over the St. Louis & San Francisco Railroad, and the latter from Jenny Lind over the St. Louis, Iron Mountain & Southern Railroad. The output of the county in 1891 was 50 per cent greater than the preceding year, being 451,379 short tons. against 300,888 short tons. The value did not increase as much in proportion, being 40 per cent more than in 1890, or \$508,560, as against \$363,668. The Sebastian County mines gave employment to 1,092 men for an average of 222 days. In 1890 the number of men employed was 683 for 214 days.

## COAL PRODUCT OF SEBASTIAN COUNTY, ARKANSAS, SINCE 1887.

YEARS.	Short tons.	YEARS.	Short tons.
1887.....	39,500	1890.....	300,888
1888.....	160,594	1891.....	451,379
1889.....	165,884		





FROM VOL. III, 1888, ARKANSAS GEOLOGICAL SURVEY.

TABLE OF ANALYSES OF ARKANSAS COALS, CLASSIFIED ACCORDING TO THEIR FUEL RATIOS.\*

GENERAL INFORMATION.				PHYSICAL PROPERTIES.			CHEMICAL COMPOSITION.						RESULTS OF LABORATORY COOKING TESTS.				
No. of Sample.	Name of Pit or Mine.	County.	Thickness of Coal.	How Sampled.	Appearance.	Specific Gravity.	Color of Ash.	Water.		Sulphur.	Ash.		Fixed Carbon.	Vol. Hydro-Carbons.		Fuel Ratio.	Per Cent of Product.
			Ft. In.					Pr. Ct.	Pr. Ct.		Pr. Ct.	Pr. Ct.		Pr. Ct.			
BITUMINOUS.																	
1	Carnall's Drift.	Sebastian	3 10	From pile in drift, been dug two years	Shaly and friable.	1.469	Pinkish red.	5.259	1.49:	13.620	61.975	17.655	3.51	Product not at all fused, fragments retain their original shapes.	77.4		
2	Page's Pit	Sebastian	2 - -	From fresh fragments at mouth of Pit	Shaly, pyrites films, mineral charcoal.	1.300	Reddish gray.	0.852	1.235	3.297	78.222	16.394	4.77	Product well fused and took the shape of the crucible.	81.2		
3	Baxley Pit	Logan	2 6	From pile at mill in Paris, dug eight months.	Some what shaly, rather compact	1.295	Light red.	1.232	2.407	5.281	75.335	15.745	4.79	Product very well fused and took the shape of the crucible.	83.0		
4	Hacket City Shaft, Kansas and Texas Coal Co.	Sebastian	3 0	From 5 market cars	Shaly and friable	1.341	Pinkish gray.	0.853	1.324	9.038	73.869	14.916	4.95	Product well fused and roughly took the shape of the crucible.	82.3		
5	Pickartz's Drift	Franklin	2	From pile fresh coal on dump	Shaly with iron stain	1.308	Brick red.	0.702	0.862	3.561	78.898	15.877	4.98	Product well fused and took the shape of the crucible.	82.6		
6	Huntington Slope, Kansas and Texas Coal Co.	Sebastian	6 6	From 2 market cars	Very friable, some what shaly.	1.293	Reddish brn.	0.928	1.143	4 845	77.538	15.546	4.99	Product well fused and took the shape of the crucible.	80.6		
SEMI-BITUMINOUS.																	
7	Claiborne's Pit.	Sebastian	5 6	From fresh face of coal in pit	Slightly shaly.	1.303	Bright red.	0.913	1.152	4.008	78.355	15.542	5.04	Product well fused, but roughly took shape of crucible.	81.0		
8	Lewis' Pit	Franklin	1 2	From pile at pit, dug one year	Shaly and very friable	1.320	Dark red.	0.883	2.451	4.236	77.200	15.230	5.07	Product well fused and took shape of crucible.	81.0		
9	McConnell's Shaft	Sebastian	2 9	From pile fresh coal on dump	Quite shaly and friable	1.296	Light red.	0.600	1.142	4.579	78.298	15.381	5.09	Product well fused and took roughly the shape of crucible.	83.6		
10	Greenwood Shaft.	Sebastian	6 0	From pile fresh coal on dump	Some what shaly, but rather compact.	1.300	Drab.	0.818	2.522	5.973	75.821	14 866.	5.10	Product very well fused and took the shape of the crucible.	83.6		
11	Sullivant and Boling	Crawford.	1 2	From small pile at pit, dug one year	Shaly and slightly friable	1.366	Dark lavender.	0.761	4.958	14.200	67.131	12.950	5.19	Product well fused and took roughly the shape of the crucible.	82.8		
12	Bocquin and Reutzel Shaft.	Sebastian	5 0	From pile fresh coal on dump	Slightly shaly and friable.	1.342	Lavend'r red	0.746	1.404	5.003	77.867	14.980	5.20	Product irregularly fused, fragments well fused.	81.6		
13	Gwyn's Drift	Sebastian	4 10	From pile fresh coal on dump	Rather friable and shaly.	1.315	Pink.	0.892	1.193	6.245	77.092	14.577	5.29	Product very well fused and took shape of crucible.	82.2		
14	Carlan's Slope.	Logan		From small pile at slope, dug one month	Brittle, a little pyrites.	1.313	Brownish'r'd	0.846	1.373	4.710	78.401	14 670	5.34	Product well fused and took the shape of the crucible.	83.3		
15	Moomaw's Pit.	Franklin	1 8	From scattered fragments, recently dug	Shaly, with pyrites.	1.352	Yellowish red.	0.663	1.366	3.272	79.812	14.887	5.36	Product well fused and took the shape of the crucible.	82.2		

16	Grave's Drift .....	Crawford..	1 6	From pile fresh coal at drift.	Hard, but brittle and somewhat shaly.	1.313	Dark lavender.	0.566	2.853	7.614	75.066	13.901	5.40	Product well fused and took the shape of the crucible.	82.3
17	Petty's Slope.....	Sebastian	5 0	From pile fresh coal on dump	Slightly friable.	1.384	Dark lavender.	1.779	1.620	7.046	76.225	13.330	5.72	Product well fused and took roughly the shape of the crucible.	83.04
18	Philpot Shaft.....	Johnson ..	1 9	From pile fresh coal on dump	Rather friable, somewhat shaly	1.292	Yellowish red.	0.869	0.993	3.090	80.975	14.133	5.73	Product well fused and took shape of the crucible.	84.6
19	Watt's Slope.....	Sebastian	3 10	From pile fresh coal on dump	Slightly shaly and friable.	1.392	Dark lavender.	0.743	4.066	9.965	72.608	12.618	5.75	Product not thoroughly fused and took roughly the shape of the crucible.	83.0
20	Felker Slope.....	Franklin ..	1 8	From large pile on dump, dug six months	Rather shaly, somewhat friable	1.317	Yellowish red.	1.128	1.164	3.220	81.277	13.211	6.15	Product partially fused, but fragments partly retain original shapes.	85.0
21	Quita Slope, Quita Coal Co.....	Pope.....	2 6	From one market car	Rather shaly, not very friable, little calcite	1.339	Yellowish brown.	0.980	1.829	8.174	76.817	12.200	6.29	Product not at all fused, fragments retain their original shapes.	87.6
22	Eureka Shaft, Stuewel & Co.....	Johnson..	3 0	From one market car	Compact, not very shaly	1.345	Brownish drab.	1.100	2.745	12.042	72.835	11.278	6.46	Product not at all fused, fragments retain original shapes.	89.2
23	Coal Hill Shaft, Stuevel & Co.....	Johnson ..	3 10	From one market car	Slightly friable, calcite films	1.333	Drab.	1.017	3.672	8.351	76.119	10.841	7.02	Product partially fused, fragments retain somewhat original shapes.	87.2
24	Allister Slope, Quita Coal Co.....	Johnson..	3 7	From two market cars	Slightly friable, calcite films	1.320	Drab.	1.178	3.531	8.322	76.494	10.475	7.30	Product partially fused, fragments little changed.	86.5
25	Mason's Drift .....	Johnson..	1 4	From small pile, dug one year previous	Very friable. Shaly and slightly friable	1.339	Yellowish red.	1.116	1.155	5.863	80.860	11.006	7.34	Product slightly fused, and fragments retain roughly original shapes.	86.7
26	Harkreader's Well ..	Johnson ..	3 6 (?)	From small block, dug one year	.....	1.318	Dark brownish red.	1.563	2.867	6.313	78.910	10.347	7.62	Product not at all fused, fragments retain original shapes.	86.6

# SEMI-ANTHRACITE.

27	Shinn Slope .....	Pope.....	1 10	From fresh face of coal	Compact, little shale and pyrites, calcite films.	1.346	Pinkish gr'y	1.058	3.346	11.750	75.434	8.410	8.96	Product not at all fused, fragments retain original shapes.	88.4
Mean of the 27 samples.															83.654

# REFERENCE LIST.

REFERENCE LIST.	AUTHORITY.
Connellsville coal, Pennsylvania, standard coking coal	E. V. d'Inville
Flat top, Pocahontas coal, Virginia, "semi-bituminous" coking coal	E. V. d'Inville
Charlevoix, France, produces well formed coke	Percy
Westmoreland Gas Coal Company, Pennsylvania, gas and coking coal	E. V. d'Inville
Cumberland coal, Maryland, "semi-bituminous," excellent steaming coal	E. V. d'Inville
Broad top coal, Pennsylvania, "semi-bituminous," good forge and steaming coal	E. V. d'Inville
Bernice, coal, Pennsylvania, semi-anthracite, good steaming and domestic coal	McCreath
Wilkesbarre, Pennsylvania, anthracite	McCreath
Belleville coal Illinois, average for six mines	Worthen
Corona coal, Alabama	Smith
Rich Hill coal, Missouri	Potter
Kansas coals, average of 38 samples	Bailey
St. Bernard Coal Company (No. 11) Western coal fields, Kentucky	Proctor

\*The analyses of Arkansas coals were made by Dr. R. N. Brackett, Chemist of the Survey, and Mr. J. P. Smith, Assistant.





SCENE IN POPE COUNTY.

## BRICK CLAYS.

The soils derived from the sandstones and shales of the State are well adapted to brick making. Rocks of these kinds are most abundant along the faces of the Boston Mountains and its outliers containing the sandstones and shales of the Millstone Grit. The brick clays will be found especially abundant and good on the plains that adjoin the bases of these hills and mountains. Here the soils derived by decay from the higher rocks have accumulated and have been turned over and tempered by natural processes, while the too fat clays have been removed by water. Of course there are many other places than these where the conditions for the formation of good brick earths have prevailed. In places the lowlands along streams are covered with brick earths to a depth of from 2 to 10 feet.

The shales of Washington County, especially the Fayetteville shale and the Coal-bearing shale, are available for the manufacture of vitrified bricks and sewer pipes. The vitrified brick industry has assumed large proportions at Ft. Smith, Ark. The principal streets of that city, of Little Rock and of Pine Bluff have been paved with brick manufactured at Ft. Smith.

### BRICK STATISTICS OF WASHINGTON COUNTY, FROM VOL. I OF THE GEOLOGICAL SURVEY'S REPORT FOR 1889:

Place	No. of Yards	Make	Men Employed	Average Monthly Wages	Capital	Output for 1889	Value of Kiln	Repressed
Fayetteville.....	2	Hand.	20	\$ 650	\$ 825.00	450,000	{ \$8 to \$10 per M Repressed \$15	25,000
Springdale .....	2	{ 1 hand. 1 machine. }	15	390	3000.00	800,000	\$6	

Brick kilns of much greater dimensions than these are regularly operated at Ft. Smith, Little Rock and Malvern. Pressed brick are manufactured at Malvern.

## TIMBER.

### NOTES ON THE FOREST TREES OF THE CROWLEY'S RIDGE REGION.

FROM BRANNER'S GEOLOGICAL SURVEY.

A few words in the way of general introduction may be allowed. In the first place there is a great similarity in the forests in the lowland region east and west of Crowley's Ridge. This similarity extends both to the species and their abundance. But the physical differences are not great and little else is to be expected. However, there are some minor facts of interest in the distribution of certain species. Cottonwood, for instance, is far more common in the valley of the St. Francis than in that of the L'Anguille. Beech is more abundant along the northern third of the ridge country than farther to the south. The pine areas are very much restricted on the ridge, and are found only on those parts of it which are surmounted with sands and gravels; in other words, only where the tertiary sands and gravels rise quite to the tops of the hills. It does not, as a rule, run far down the sides of the hills and is rarely found in the valleys. The cypress is abundant alike in the lowlands on both sides of the ridge, but it is seen at its best in the valley of the White River. The poplar does not appear to any extent at the tops of the hills, and where they are sandy it is never found; but in the valleys it is both abundant and large.



In the second place the forests are often very dense and the timber of a superior class. In many sections of this region the forests are still practically untouched and stand in all their original vigor. While certain modifications need to be understood for this statement concerning those localities which are along the railroads, it is quite true for the mass of the forest covered region, that is to say, for all Eastern Arkansas except the small areas of prairie lands in the valley of the White River. It is true, also, that the habits of stock which seek mast are slowly modifying the nature of the forests by changing the nature of the undergrowths. Some they trample quite out of existence, other forms they seriously affect so that they are engaged in an uncertain struggle for existence. The oaks bearing bitter fruits are on the increase while those whose fruit is sweet are on the decline in respect to number of young trees growing in stock raising districts. The result is easy of interpretation. The newer forests will eventually be composed largely of the black oaks and similar forms with bitter masts.

A third feature of great interest lies in the encroachment of the forest areas on the few remaining prairies of Eastern Arkansas. Few large prairies now remain, and the largest of these is the region west of and near Devall's Bluff, that is, west of White River. About all these prairies are to be seen the advance guard of the forests, pushing their way into the treeless region in long straggling outliers of black jack, sassafras, willow, oak and blue ash. Mixed with them are a goodly number of sumach bushes of all sizes, and these all are reclaiming the lands to the forests.

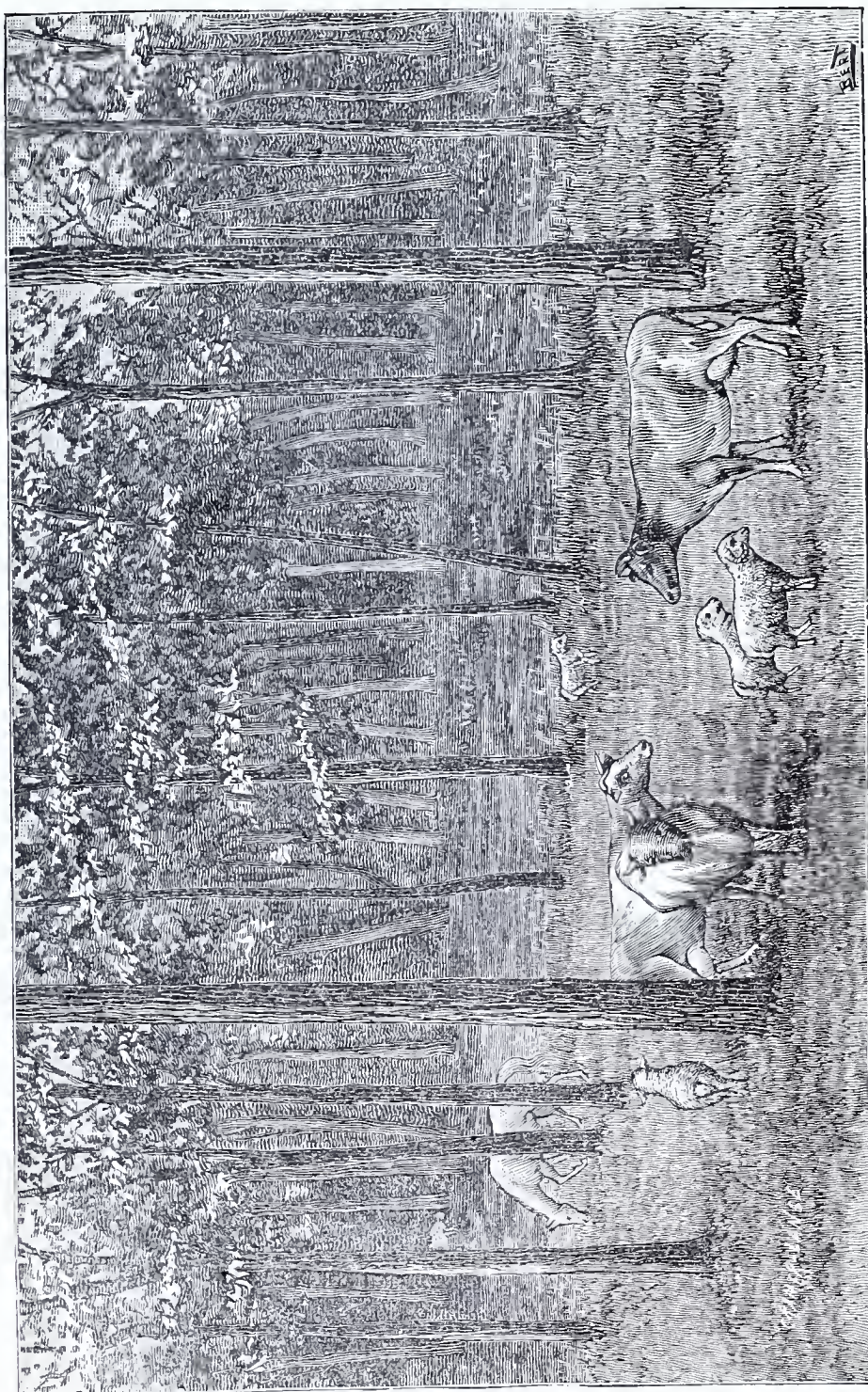
The railways are modifying the character of the herbaceous vegetation to a marked degree all along their course. Many northern and western plants, seen nowhere else in Eastern Arkansas, were noticed along the Iron Mountain Railway. Some of the more common noxious weeds are being rapidly introduced. Many of the prairie regions, the source of most of the native hay of the eastern part of the State, are being claimed by these strangers. About Goodwin and through the Grand Prairie this encroachment of imported weeds is very marked.

Such further notes as may be of general interest may be found in connection with the several species mentioned in the subjoined list:

#### REGISTER.

- THE MAGNOLIA—(*Magnolia grandiflora*, Linnæus.)  
 THE CUCUMBER TREE—(*Magnolia acuminata*, Linnæus.)  
 MAGNOLIA—(*Magnolia macrophylla*, Michaux.)  
 THE YELLOW POPLAR OR TULIP—(*Liriodendron tulipifera*, Linnæus.)  
 THE PAW-PAW—(*Asimina triloba*, Dunal.)  
 THE LINDEN OR BASS WOOD—(*Tilia Americana*, Linnæus.)  
 WAIT-A-BIT, TEAR BLANKET—(*Xanthoxylum clava-herculis*, Linnæus.)  
 THE HOLLY—(*Ilex opaca*, Aiton.)  
 HOLLY—(*Ilex Decidua*, Walter.)  
 WAHOO—(*Euonimus atropurpureus*, Jacquin.)  
 (*Rhamnus Caroliniana*, Walter.)  
 BUCKEYE—*Aesculus*, sp. indt.)  
 RED LEAVED MAPLE—(*Acer rubrum*, Linnæus.)  
 SUMACH—(*Rhus copallina*, Linnæus.)  
 BLACK LOCUST—(*Robinia pseudacacia*, Linnæus.)  
 COFFEE BEAN—(*Gyrinocladus canadensis*, Lamarck.)





CROWLEY'S RIDGE.



- THE HONEY LOCUST.—(*Gleditschia triacanthos*, Linnæus.)  
 WILD PLUM—(*Prunus Americana*, Marshall.)  
 THE CRAB APPLE—(*Pyrus coronaria*, Linnæus.)  
 THE WITCH HAZEL—(*Hamamelis virginica*, Linnæus.)  
 SWEET GUM—(*Liquidambar styraciflua*, Linnæus.)  
 FLOWERING DOG-WOOD—(*Cornus florida*, Linnæus.)  
 BLACK GUM—(*Nyssa sylvatica*, Marshall.)  
 TUPELO GUM—(*Nyssa uniflora*, Wangenheim.)  
 THE PERSIMMON—(*Diospyros virginiana*, Linnæus.)  
 THE BLUE ASH—(*Fraxinus quadrangulata*, Michaux.)  
 THE WHITE ASH—(*Fraxinus Americana*, Linnæus.)  
 THE GREEN ASH—(*Fraxinus viridis*, Michaux.)  
 CATALPA—(*Catalpa speciosa*, Warder.)  
 SASSAFRAS—(*Sassafras officinale*, Nees.)  
 WINGED ELM—(*Ulmus alata*, Michaux.)  
 THE WHITE ELM—(*Ulmus Americana*, Linnæus.)  
 (\**Planera aquatica*, Gemelin.)  
 THE RED MULBERRY—(*Morus rubra*, Linnæus.)  
 THE SYCAMORE—(*Platanus occidentalis*, Linnæus.)  
 HICKORY—(*Hicoria aquatica*, (Michx. f.) Britt.)  
 THE PECAN—(*Hickoria pecan*, (Marsh,) Britt.)  
 BUTTERNUT OR WHITE WALNUT—(*Juglans cinerea*, Linnæus.)  
 THE BLACK WALNUT—(*Juglans nigra*, Linnæus.)  
 THE BLACK BIRCH—(*Betula nigra*, Linnæus.)

WHITE OAK—(*Quercus alba*, Linn.)

The white oak is a beautiful tree and one which is most abundant all over Eastern Arkansas, and on Crowley's Ridge where the underlying geologic formations are pleistocene. It is very abundantly distributed along the slopes of the ridge even in those portions where the soils are too siliceous for its great development. Immense quantities of this grand tree have here been cut down and destroyed. In many places the forests have been thrice cut over and the better classes of timber are now all gone. There are yet, however, vast quantities of the largest and finest timber remote from the railways, and east of the southern half of the ridge. The use most common for this timber in this area is for the manufacture of barrel staves and heads, there being many mills along the foot of the ridge engaged in this industry. At some places, as at Poplar Bluff in Missouri, at Paragould, Harrisburg, and at numerous smaller places where there are mills, the annual output is very great. Car load after car load of staves, in the rough or partially finished, or "knocked down" after fitting, are to be seen in transit daily in all parts of the region. There is a most wanton destruction of valuable timber in this industry, which does not use all the tree, only a small portion of it being available. The remainder is left to rot, or is made into great piles and burned. No use is made of the ashes, which might be gathered and leached with profit. The bark, too, is a complete loss, notwithstanding that it is rich in tannin and might be utilized in the manufacture of leather, after having first been treated on the ground to extract this valuable product. Not only does the cupidity of men incite them to the felling of the largest and most perfect trees, but, in common with all suitable oaks of other species, many hundreds of

thousands are annually cut into railway ties and shipped out of the State to regions less favored. The number of ties made and sold in Arkansas would seem incredible to one not familiar with the actual state of the industry. The product goes far to the west to the States with treeless plains, as Nebraska, Kansas, Colorado, to say nothing of the thousands utilized nearer home and at home in railway construction. The prices received by no means represent the actual value of this tree which is rapidly becoming a matter of history in this part of the State.

The barrel timber is used largely for wine and whisky casks, these liquids requiring a fine and close grained wood to retain the product. Many thousands of these barrels, in unfinished condition, or rather in "knock down" condition are sent to Europe where they are used for similar purposes. Petroleum, which likewise requires barrels of fine texture, is also shipped largely in casks made from this wood. Perhaps it is safe to say that the wood of the white oak is put to more common uses than that of any other forest tree in the United States. There is scarcely a branch of wood working industry which does not use it one way or another.

#### THE WATER OAK—(*Quercus aquatica*, Walter.)

The water oak is found associated with the willow oak (*Quercus phellos*) in considerable numbers in all Eastern Arkansas. It is very common in the slash regions of the Cache and L'Anguille, and does best on poor and wet soils. It does not attain a very great size, at least it did not seem to us to ever grow very large. It is used for posts and seems to be well adapted to that purpose.

#### THE OVERCUP OAK—(*Quercus lyrata*, Walter.)

This is one of the most abundant and largest oaks of the St. Francis Bottoms, and is likewise one of the white oaks. It is commonly called the overcup oak, from the peculiar characters of the cupules which hold the fruit. The acorn is nearly entirely covered. The wood is cut and marketed with white oak and is not often discriminated from it. Like the white oak it is largely employed in the manufacture of such barrels as need to be made from a close textured wood.

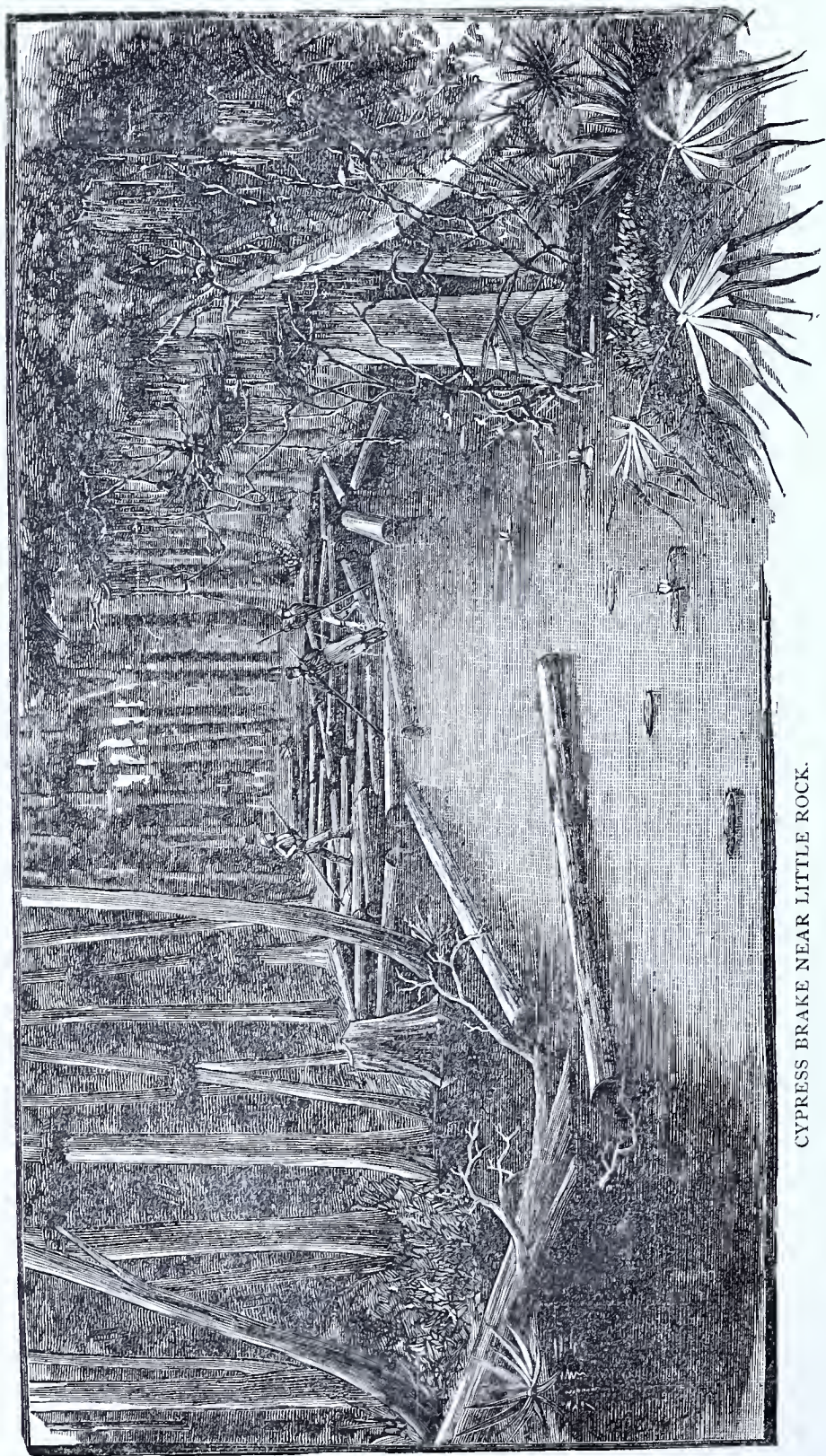
#### THE MOSSY CUP OAK—(*Quercus macrocarpa*, Michaux.)

As implied in the name the acorns of this tree are very large and are further distinguished by a heavy and long fringe. To this tree therefore the common name of mossy cup oak has been popularly applied. It is very abundant and is of especial value for fencing purposes in this portion of Arkansas. This species resists the action of wet soils, or of water in soils, better than any other American oak. It is therefore correspondingly valuable. It is very common and grows very large.

#### THE COW OAK—(*Quercus michauxii*, Nuttall.)

This species, called cow oak by the people, is a common form, growing to be a rival of the white oak in the bottoms of the St. Francis, where it attains its best development. It is a source of abundant mast for stock and is much sought by it. The acorns are large and sweet. While a close grained wood and largely used in barrel manufacture, it does not hold liquors as well as either the white oak or the overcup oak, at least such is its reputation about the mills. Many, perhaps most of the barrels used for pork packing are made from the wood of the cow oak, a purpose for which it is admirably adapted.





CYPRESS BRAKE NEAR LITTLE ROCK.



THE PIN OAK—(*Quercus palustris*, DuRoi.)

Possibly the pin oak is the most abundant oak of the slash country. From Wynne north along the base of Crowley's Ridge one is never out of its range. It is used chiefly for firewood and for railway ties, thousands of the middle sized trees being exported in the latter form.

Of other oaks not less than six or eight additional species might be distinguished. To the professional botanists, interested in questions of geographic distribution, abundance, crosses, variations, species, influence of habitat, and similar matters, this region offers a most inviting field. The prevailing features of the forests are contributed by the oaks and one is never, except in the heart of a cypress swamp, out of sight of a half dozen forms at one time.

THE WILLOW OAK—(*Quercus phellos*, Linn.)

The willow oak is readily distinguished by the character of the foliage, the leaves closely resembling those of the willow. It is a very abundant tree in Arkansas, attaining its greatest development in the low and wet lands west of Crowley's Ridge. It is usually regarded as indicative of poor land.

THE BEECH—(*Fagus ferruginea*, Aiton.)

The beech is of erratic distribution along Crowley's Ridge, but does not appear to occur in any quantity in the lowlands to the west. It occurs abundantly from Helena to the Missouri line on both sides of the ridge, but most commonly along the slopes of its west face. On the top of the ridge none was noticed north of Jonesboro, though it is quite common south on the highest ridges. Scattering trees occur for the most part in and south of St. Francis County, while west and north of Gainesville and Jonesboro, in the Cache second bottoms, the species is most abundant and large. Many of the largest examples noted in the south of the ridge were either hollow or dry at the heart, which fact gives the trees certain peculiar features. It does not seem to be as common in the St. Francis bottoms or along the east side of the ridge as on the west, but no comparative notes were made on this subject. Except for firewood the tree appears to have no use in this part of the country.

## THE PINES.

There remain but two trees especially worthy of mention among the timber resources of this area, and they are both members of the great family Coniferæ, or cone bearing trees. The physical conditions under which each thrives are of the most diverse kind.

THE CYPRESS—(*Taxodium distichum*, Richard.)

The cypress is familiar to all who dwell in the eastern or southern portions of Arkansas. As is so well known the tree thrives in swamps and other wet and low lands; it often, as in the valley of the L'Anguille, stands in the very middle of the sluggish streams.

From its great utility the cypress is much sought after by the lumbermen. Its uses are very diverse, but it is especially adapted to the manufacture of shingles, into which article of commerce many thousands of feet are annually converted. There are several mills along Crowley's Ridge at Madison, Paragould and St. Francis, where shingles are made in great quantities. The powers of resistance which this wood offers to the action of wet and damp stations, as in fence building, telegraph poles, electric light poles and similar uses has caused it to be in great demand. Many hundreds of the smaller sized trees are employed for poles.



The best trees that are accessible are now somewhat within the borders of the cypress swamps, the more easily reached having, as a rule, already been marketed. The nature of the places best suited to the growth of the cypress renders difficult its cutting so that its price is slowly but steadily advancing. "The most valuable timber has now, however, disappeared from the immediate neighborhood of the low river banks easily accessible at seasons of high water during every winter and spring. Only groves standing remote from the banks of the water courses, and which are only accessible to the raftsmen during exceptionally high stages of water, now supply this lumber. The shallow lagoons, covered with water except during seasons of prolonged drouth, and called cypress creeks, present in the spring of the year a strange sight. No object meets the eye between the immense trunks of the mighty trees, as in these cypress groves no other tree nor shrub can live in the dark shaded, water covered soil. These reservoirs of drainage, generally without an outlet, are called cypress lakes if the water in any part of them, too deep to allow the growth of trees, confines the cypress to their more shallow borders. Here the cypress arrives at its greatest dimensions and produces timber of the finest quality." This statement, originally applied to the cypress swamps of the Yazoo region in Mississippi, is true to a very great extent of the cypress regions of the St. Francis and White Rivers. Perhaps the great body of cypress in Northeastern Arkansas is still standing the valley of the White River, but even here the most accessible have been removed. From the top of Crowley's Ridge, looking either to the east or the west, at those points which command the valleys of the St. Francis and the Cache, the cypress areas can be readily made out by the observer. The tops of the giant trees tower far above the heads of the intervening forests and give one the location of the swamps for hundreds of square miles. It is evident to a person thus situated that immense quantities of this tree still exist in Arkansas, and that this region will yet supply vast quantities of valuable cypress timber. Into the depths of the greater swamps the lumberman has not yet penetrated.

#### THE SHORT LEAVED PINE—(*Pinus mitis*, Michaux.)

This is the short leaved pine of authors and is practically the only species growing within the State north of the Arkansas River. Its distribution has not been carefully studied in the areas outside of Crowley's Ridge on which its occurrence was carefully noted. Its distribution is somewhat erratic, but after all, is readily seen to conform to certain physical conditions imposed by the character of the soils. It rarely descends to the base of the ridge and only then in straggling representatives. The lowest trees noticed, small ones at that, were about two miles north of Wittsburg in Cross County, where a few saplings were found near the road not far from Copperas Creek. The highest points in the ridge in Cross County where the soil is siliceous or sandy have a growth of pine, none of which is very large. The presence of numerous large pine stumps, however, tells the story of this tree in language that cannot be misunderstood. Near Harrisburg, Vandale, and Jonesboro are to be found, on the tops of the highest hills, stretching away in long straggling lines, what now remains of the pine forests of this portion of the ridge. But in Greene and Clay Counties, and on some of the more elevated hills of Craighead County, there is still standing many fair sized pine trees. The largest and best have, however, been cut off, the region having been twice cut over. Farther from the railways there is still considerable pine standing, much of it large and fine. A typical locality is about Hardy's mill not far from Gainesville. Here, on the high hills that are composed of the tertiary sands and gravels, there are still many large pines. But their entire removal is the question only of a short time.

Of the pine reported for the Crowley's Ridge region by the agents of the tenth census, which estimate was made for 1880, comparatively little now remains. That census gave the following figures, which may not be wholly devoid of interest in this connection:

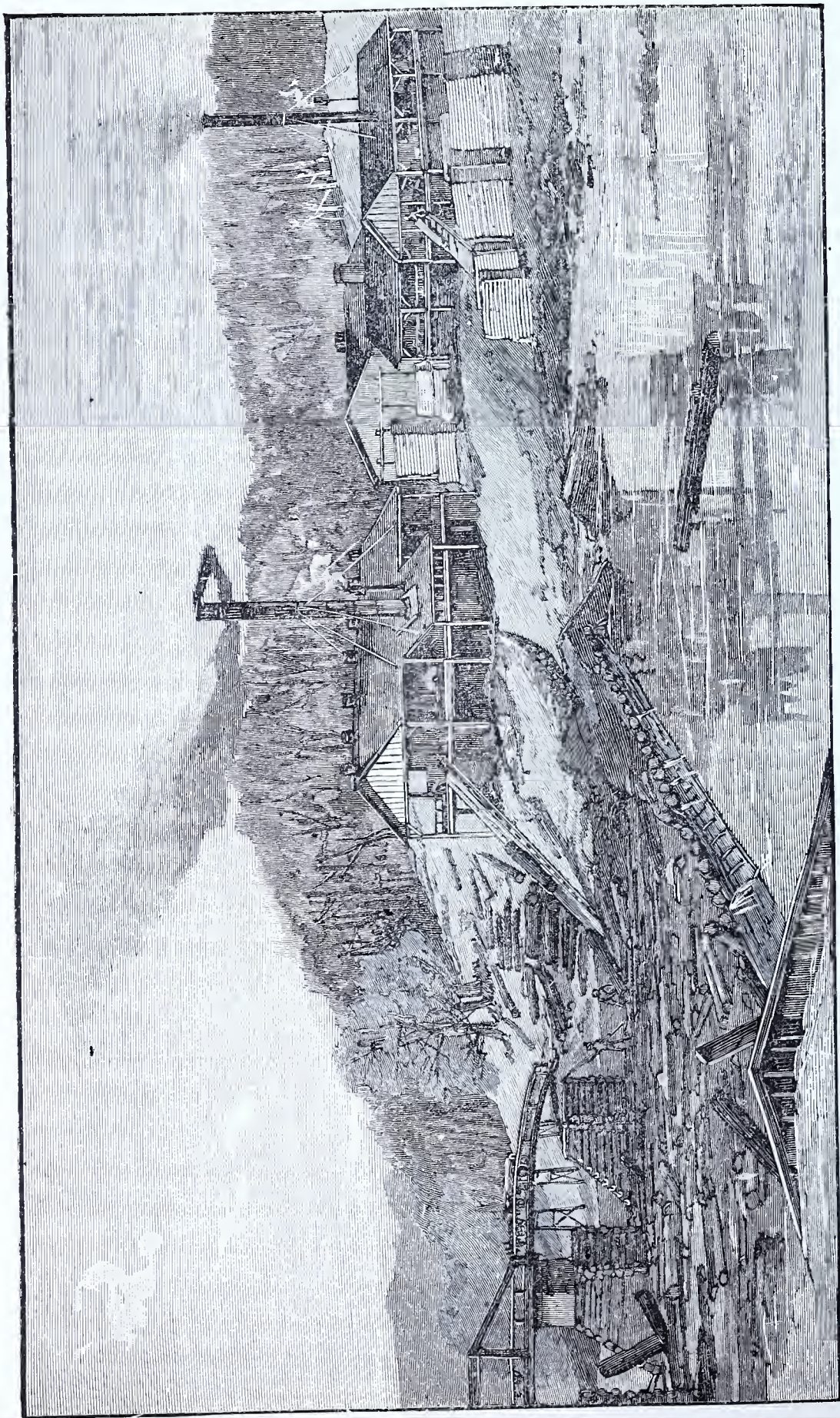
COUNTIES.	FEET BOARD MEASURE.	COUNTIES.	FEET BOARD MEASURE.
Phillips .....	21,000,000	Poinsett.....	45,000,000
Lee .....	14,000,000	Craighead .....	18,000,000
St. Francis.....	7,000,000	Greene .....	38,000,000
Cross .....	54,000,000	Clay.....	3,000,000

It is safe to say that not one tenth of this timber is standing at the present time. The great pine producing areas south of the Arkansas River form, at the present time, the object of attention from the lumber manufacturer, so that it is possible that the pine producing areas in our section may have time for recuperation, since pine replaces pine in this region.

#### VALUE OF ARKANSAS FORESTS.

NAMES.	STATION.	CAPACITY PER DAY.
Big Creek Lumber Co .....	Grace..... Ark.	20 Thousand Feet.
J. I. Porter & Co .....	Tyrone .....	30 " "
Frank Kendall.....	Kedron .....	40 " "
Bluff City Lumber Co.....	Anderson .....	35 " "
H. C. Draughon & Co .....	Kingsland .....	35 " "
Bear State Lumber Co.....	Kingsland .....	30 " "
Dorchester .....	Kingsland .....	20 " "
Saline Lumber Co.....	Kingsland .....	20 " "
Moro Lumber Co .....	Kingsland .....	20 " "
Southern Land and Lumber Co.....	Dry Run .....	75 " "
Acruman & Son .....	Fordyce .....	20 " "
Fordyce Lumber Co.....	Fordyce .....	50 " "
Caney Lumber Co.....	Thornton .....	20 " "
W. R. Pearson.....	Thornton .....	45 " "
R. Buchanan .....	Thornton .....	30 " "
Little Bay Lumber Co.....	Little Bay.....	40 " "
Eureka Lumber Co .....	Harlow .....	40 " "
Cotton Belt Lumber Co .....	Bearden .....	45 " "
Justice Lumber Co .....	Bearden .....	20 " "
Freeman Lumber Co.....	Millville .....	60 " "
Eagle Lumber Co .....	Eagle Mills .....	75 " "
C. E. Linedecker .....	Lilley .....	20 " "
Johnson Lumber Co.....	Van Duser .....	25 " "
Farmer .....	Buena Vista.....	20 " "
J. E. Potts Lumber Co .....	Evans .....	75 " "
Keystone Mills .....	Evans .....	40 " "
J. W. Harrington .....	Stephens.....	10 " "
American Lumber Co.....	Milner .....	40 " "
Cotton Belt Mill Co.....	Cotton Belt.....	40 " "
Magnolia Lumber Co .....	Magnolia .....	30 " "
A. J. Niemeyer Lumber Co.....	Waldo .....	50 " "
W. M. Johnson .....	Waldo .....	20 " "
J. M. & V. M. Davis .....	Waldo .....	25 " "
W. T. Davis & Co .....	Buckner .....	25 " "
Baker & Stange .....	Buckner .....	15 " "
Bodcaw Lumber Co .....	Stamps .....	130 " "
Sunny South Lumber Co .....	New Lewisville .....	50 " "
Interstate Lumber Co .....	New Lewisville.....	30 " "
Red River Lumber Co .....	New Lewisville.....	50 " "
Moore & Wells.....	Motts .....	30 " "
Cameron Lumber Co .....	Cameron Mills.....	30 " "
E. W. Frost & Co.....	Genoa .....	40 " "
Wm. Armstrong .....	Genoa .....	25 " "
Gate City Lumber Co .....	Texarkana .....	50 " "
Martin Lumber Co .....	Bolinger .....	30 " "





ROCKPORT ON THE OUACHITA.



## HISTORY OF THE ARKANSAS LUMBER INDUSTRY.

BY MESSRS. R. W. HUIE AND FRANK R. PIERCE.



CONCATENATED ORDER OF HOO-HOO.  
The Lumbermen's Organization.

A bird's-eye view of the State of Arkansas (a State larger than England, New York or Virginia, and when settled as thickly as Massachusetts, will have a population of 12,000,000) would present to the vision of the beholder, in mountains, rivers, wooded valleys, uplands and lowlands, a wonderful kaleidoscopic panorama—a variegated, picturesque and extraordinary landscape. The presence and prominence of the ranges of mountains traversing its territory in different sections would at once accentuate the densely timbered primeval forests which these embosom, while its great wealth of rivers presenting 3,250 miles of navigable waters, which wind their eternal serpentine courses, like so many vast ribbons of burnished silver, along or through Nature's own

forestry, would form a beautiful scene of reflected brightness for the expansive shading of growing vegetation that altogether would constitute a composite picture, which, to the true lumberman's heart, could scarcely fail of suggesting a veritable "Garden of the Gods"—if I may be pardoned for becoming somewhat rhapsodical on the subject of the State's timber resources, which of course constitutes the entire foundation for the vast possibilities of the future lumber business of the State, as well as of the past and present. Such a survey would disclose the fact that not a bald and barren region of rolling prairie constituted the one striking characteristic of the State, but that a bounteous timber supply, if the farm lands be excepted, would be the main feature in its contour and personnel.

From "King's Hand Book of the United States"—just out, and the very latest published authority on the subjects upon which it treats—on page 65, I quote: "There are about 30,000 square miles of timber land in Arkansas, the most abundant being the yellow pine." There are 15,000 square miles of pine land. The cypress is found in the swamps of the east and south. Different species of oaks abound, the white oak being the most valuable. Yellow poplar occurs in the east and cedar is abundant in the northern mountains. Other valuable woods are walnut, cherry, sweetgum, hickory, beech, maple, elm and ash, persimmon, pecan, catalpa, sycamore, buckeye, dogwood and locust. "From these forests," continues this authority, "\$20,000,000 worth of lumber is cut yearly, large shipments being made to Europe." Again, on page 68, appears the following quotation from Ex-Governor S. P. Hughes, and at present an Associate Justice of the Arkansas Supreme Court, viz: "We know that Arkansas abounds in all the material elements of wealth and greatness; that she has over 2,000,000 acres of State lands to be donated to actual settlers, and that there are within her borders 5,000,000 acres of public lands of the United States subject to homestead entry, to be had in 160 acre tracts at a cost of not over \$20 per tract. We are rich in timber, having 30,000 square miles of grand forests of the most valuable varieties;



rich in minerals, having over 12,000 square miles in coal fields, an abundance of iron, manganese, zinc, copper, marble, granite, limestone, lithograph and soapstone." Since Governor Hughes made this statement, immense deposits of valuable aluminum clay have been found in the State. Excepting the prairie lands and lands in cultivation, the whole State is heavily timbered. So much for the timber resources and possibilities of the great and rapidly developing State of Arkansas.

Now, as to a history in brief, and a resume of the Lumber Manufacturing Industries of the State. Quoting once more from the volume to which I have previously referred, I take from page 68, the following extract: "The manufactures of Arkansas are small compared with the quantity of raw material found within her borders." Her coal, lumber, clays, marble, chalk, building stone, whetstone, manganese and cotton, will undoubtedly cause the manufacturing interests to increase in the future. In 1880 there were in Arkansas 1,202 manufacturing establishments, employing about 5,000 hands and a capital of \$3,000,000. In 1887 the number of factories had increased to 2,400, employing 16,000 hands and capitalized at \$58,000,000. Flour and lumber mills employ the great bulk of this investment." Later on I shall present more in detail, larger and more comprehensive statistics, compiled from absolutely authentic sources, which show the present status and magnitude of the Arkansas lumber business, but for the present shall sketch briefly the birth and advent of the industry here. From the best authenticated information obtainable from living witnesses in this the southwestern part of the State, I conclude that the circular saw made its advent in this section not earlier than the 50s. Previous to that time the custom as to the manufacture of useful lumber, was to saw it from the rough logs by means of what was then called a "whip saw," a slab of notched iron, more cumbersome but not altogether unlike the familiar "crosscut saw" of the present. The only purposes for which manufactured lumber was used in the earlier days of the settlement of this State were those of flooring and constructing door and window shutters, when the boards were never dressed. The sawmill personnel then consisted of a hewn log, squared with the broadax, usually to about a foot square: this was laid horizontally on a platform or trestle seven feet above the ground and a straight mark having been made on the stock thus prepared with a line and some sort of colored liquid, for the guidance of the upper sawyer, one stout and brawny lumberman mounted the log and pulled the "whip saw" up from below and another sawyer underneath pulled the saw down from above through the log, and thus the two would produce possibly one or two hundred feet of lumber per day. This may seem a primitive method of producing boards, but such was the state of affairs in Southwest Arkansas within the memories of very many old settlers yet living, and by no means in their dotage. Indeed, I have in mind as I write this, a building yet standing and occupied as a residence, in Arkadelphia, Clark County, constructed in 1836, a material part of the original lumber with which it was built and is yet good, was sawed in this way, and one of the men who helped saw it thus is still living. This method constituted for a long while the principal, if not the only, way of producing lumber, all over the State, the exceptions of water or other power being used, having been rare. With the great abundance of water power existing everywhere so conveniently, it was but a natural step upward in the evolution of the lumber business, to apply water-power to the driving of the "sash saw," a saw still like the crosscut, which worked in a frame and made its upward and downward strokes with accelerated speed and power so effectively as that a much better grade of lumber and a much larger quantity, ranging at from one to four thousand feet per day, was produced. This "sash saw" was undoubtedly the progenitor, probably the grandfather of the "gang

saw" of to-day. It represented the "monkey stage" of the "gang saw's" evolution. The final appearance of the circular saw announced the awakening of a slumbering giant, destined by its activity and magnificent prowess to cause a buzz in the forest wilds of the State, that like the ominous booming of the long muzzled cannon, known of history, was "heard all around the world;" and yet the use of the circular saw did not so rapidly augment, in volume, the lumber industry, as such an event seemingly should have done, when the superb conditions for its growth were so auspiciously at hand in every locality; previous to the advent of the great trunk railways which now traverse this State from different points of the compass, binding her in close embrace to her sister commonwealths, the sawmill industry, save in exceptional localities, did not assume anything at all like great proportions: the great majority of all mills then existing were those of small capacities, and their fixtures, machinery and accessories were mechanical simplicities, and unwieldy and puerile seeming paraphernalia now. Even as late as in the 70s, in places where millions of feet are now cut per day, a production of 5,000 or 6,000 feet was rather a remarkable average daily output, while an output of 10,000 feet of lumber in a day would have been an extraordinary product. In the absence of railway transportation facilities, such mills had only to supply the local demand, embracing an area of perhaps 15 or 20 miles of contiguous territory; then, lumber being hauled only along the ordinary dirt roads, in road wagons, drawn by mules, horses or oxen, was sold by the hundred feet, and a lumber bill for one purchaser footing up into the thousands of feet was indeed a "fat take," which to be sure came singly and never in whole battalions, so to speak: nor was the taste so exacting then as it now is. The lumber business had not then become that precise science which experience and education with its lines has throughout the State made it now to be. Then the quality of the product was not so critically considered, and classifications and gradations such as now obtain everywhere, had no existence in the main portions of the State. Lumber then like whisky, was all good, some however, being better than other. "Culls" were not then so much thought or spoken of; were not so aggressively large in bulk then, as now this aggravating rubbish is wont to become. But if the output was small, and the average quality was not of a high grade, the prices commanded by it were truly compensating—then it was worth \$20 to \$30 per 1,000 feet at the mill, as compared with \$14 per 1,000 feet of "first" at the mill now. But the construction in 1873 of the St. Louis, Iron Mountain & Southern Railway from the Missouri State line across the entire State of Arkansas, having rendered possible the safe and rapid transportation to any of the open markets of the United States in particular, and with the outside world at large in general, of lumber as of any other valuable and indispensable commodity, a new impulse all along the lines of that railway and its branches was given to the production of lumber in this State, and this also might be said of the completion later on of the "Cotton Belt" road, and of course applies to the construction of the Fort Smith Railway.

In addition to this lumber product, there is also turned out annually, in the State, the following closely related forest products: Cedar posts and piling, 1,600,000 pieces; hickory, 1,000,000 feet; cypress shingles, 300,000,000; felloes and staves, 1,500,000,000; poplar, 8,500,000; ash, 20,000,000; spokes, 2,000,000—the value of these swells the total value of the State's forest products to not less than \$20,000,000.





A history of the lumber industry of Arkansas would not be complete without reference to Capt. R. W. Huie, whose portrait appears above. Mr. Huie is a native of Arkansas, was born in Waldron, Scott County, in the year 1845, received an ordinary country school education, served an apprenticeship as a tanner, volunteered his services to the Confederacy at the age of seventeen and served his country in the capacity of a soldier for a term of three years.

After the war he engaged in mercantile pursuits, which claimed his entire attention up to 1886, at which time, in connection with others, he organized the U. T. A. & M. Ry. Co., and the Arkadelphia Lumber Company, which companies he now represents in the capacity of general manager. In the year 1889, in connection with C. E. Neely and Dr. J. R. Dale he organized the Citizens Bank and was elected president, which position he still occupies.

He claims that his reason for being a lumberman is that he was born in a house constructed of yellow pine logs, floored, ceiled and covered with yellow pine boards, and rocked in a yellow pine cradle, in the yellow pine forests of Arkansas.

## FRUIT GROWING.

"It is too late in the day for any to dispute the proud pre-eminence of Arkansas as a fruit country. She wears at her girdle every Pomological scalp in sight, to-wit: First prize for best apple in competition with 22,000 plates. First prize at World's Fair, New Orleans, 1885, for best collection. "Wilder medal" for best seedling apple, and last, but not least, the first prize at Riverside, California. The horticultural world is at our feet and we are gently sighing for some one to tread on Pomona's skirt. The following list usually appears at our exhibitions, supplemented by eighty-eight seedling varieties: Early Harvest, Maiden Blush, Red Astrachan, Summer Queen, Alexander, Tetofsky, Early Joe, Early Strawberry, Early Red Margaret, Transcendent, Horse, Yellow May, Missouri Pippin, Yellow Transparent, Lady Finger, Rambo, Red June, Sweet Bough, Fall Queen, Oxhart, Wagner, Mammoth, Pippin, Michael Henry, Shannon, Wine Sap, Northern Spy, Ben Davis, Hubbardson, Newton Pippin (green), Newton Pippin (yellow), McAfee, Pryor's Red, Jeniten Red, Winter, Sweet, Shockley, Ingram, Rhode Island, Greening, Rome Beauty, Baskin's Red, Esopus Spitzenger, Royal Red, Willow Twig, American Golden Russett, Roxbury Russett, English Russett, Arkansas Beauty, Gilpin Lawlor, White Pippin, Nickajack, Smith Cider, Roman Stem, Autumn Strawberry, Grimes' Golden, Hall's Seedling, Huntsman Favorite, Arkansas Black, Baldwin, Worthen, Kentucky Streak, Vandevere, Shocklow, Hatcher, White Winter, Pearmain, Yellow Bellflower, Gloria Mundi, Capp's Mammoth, Pound Pippin, Twenty Ounce, Fall Pippin, Schale's Seedling, Gill's Beauty, Croffelt's Red, Western Beauty, St. Lawrence, Lady Sweet, Tallman Sweet, Large Red Crab, Transcendent Crab, Virginia Greening, Pennock, Buncombe, Fallwater, Golden Pippin, Buff, Fisher, Red Winter, Taunton, Seek-no-further, Renish, May, Western Beauty, Coffelt's Red Star, Mammoth Sweet, Golden Winter, Tune, Brightwater, Stephenson Golden, Elkhorn, Bently, Peck's Pleasant, Wilson Pippin, Russell's Red Streak, Paschall, Buckingham, Philadelphia, Graft, McLellan, Black Detroit, Wade's Swaar, McCaleb Tullahee, Pennsylvania Cider, Cole's Redsteak, Crawford Pippin, King Tomkins County, Porter, Reed's Sweet, Clark's Red, Cole's Pearmain, Blue Pearmain, Kendrick's Golden, Green Stripe, Nugent's Pippin, Jonathan, Sweet Rambo, Clark's Stripe, Domine, Newton Spitzenberg, Jersey Red, Fisher Seedling and Babcock.

*Pears.*—Outside of Washington Territory we concede no superiority, and here only in a few varieties, most successful are Bartlett, Tyson, Beurre d'Anjou, Vicar of Wakefield, Onandago, Duchesse d'Angoulême, Osband's Summer, Lawrence, Benne Clairgau, Jefferson, LeConte, Flemish Beauty, Clapp's Favorite, Howell, Buffam, Bloodgood, Doyenne d'Ete, Beurre, Easter, Sekel, d'Arenberg, Early Harvest, Keiffer.

*Peaches.*—In the mountain protected sections there has not been an absolute failure in thirty-five years. The favorite varieties are Arkansas Traveler, Wilder, Piquet's Late, Emelia, Elberta, Stump the World, Early Tillotson, Gary's Held On, Early Rivers, Salway, Porter, Mixon Cling, Beer's Smock, Briggs' May, F. St. John, Thurber, Nix's Late, Alexander, Columbia, Wheatland, Ringold, Chinese Cling, Harris' Early, Amsden, Mixon Free, Blood Cling, Lady Ingold, Gen. Lee, Susquehannah, Crawford's Early, Crawford's Late, Lemon Cling, Health Cling, Shumaker.

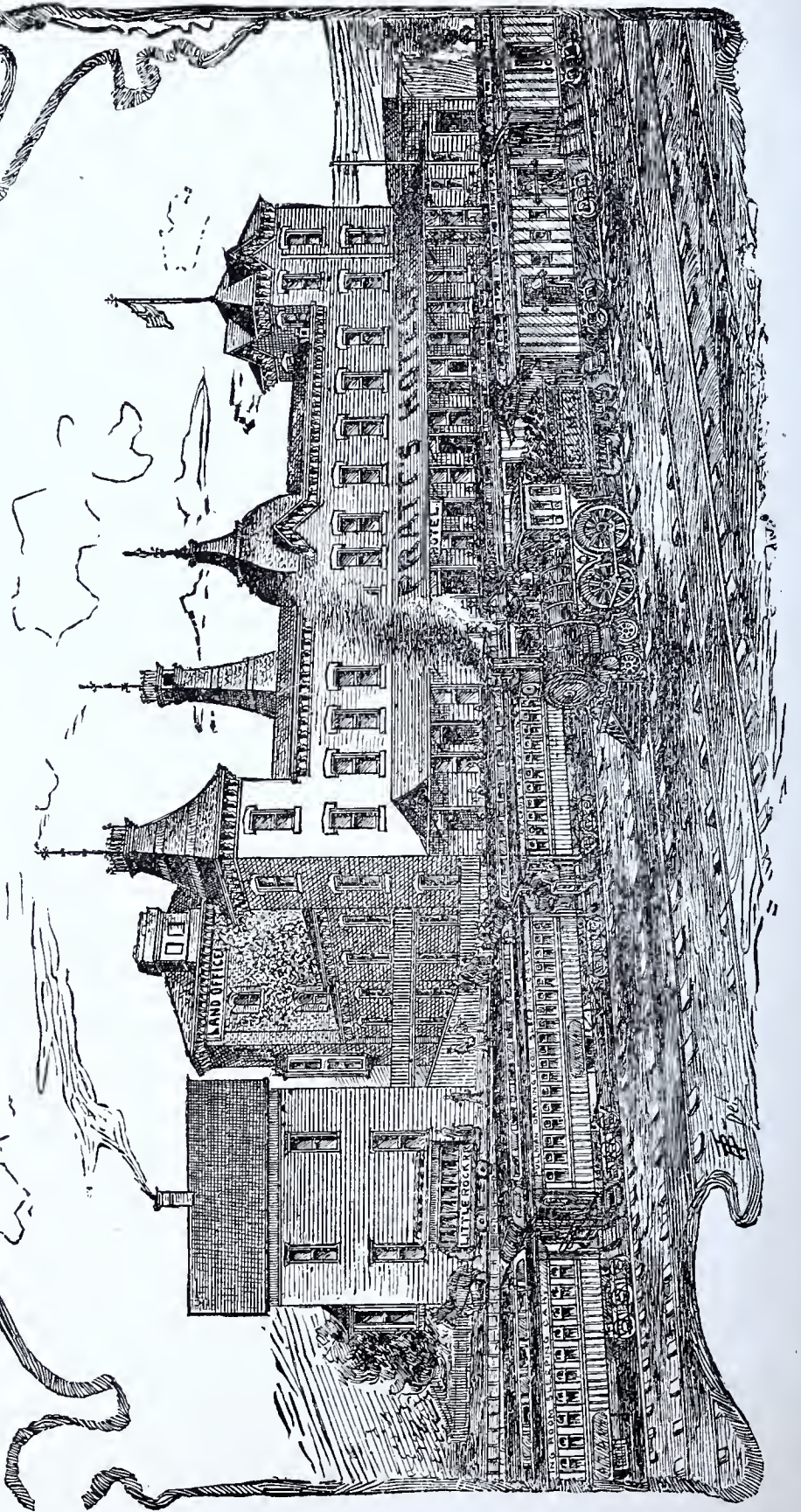
*Grapes.*—Arkansas is the home of the grape and where tame varieties are planted the wild ones must be grubbed up. All the newer varieties are cultivated with more or less success. The favorite varieties are Ives' Seedling, Champion, Lenoir, Concord, Martha, Herbemont, Black July, Elvira, Delaware, Louisiana, Cunningham, Hermann, Norton's Virginia, Cynthiana, Lady, Neosho, Prentiss.

A bottle of Arkansas red wine took the prize at Vienna in competition with the most prominent vintages of Europe.

Ives' Seedling, Norton's Virginia, Champion, Cynthiana and Delaware have never known disease in our State."



LITTLE ROCK  
UNION DEPOT.





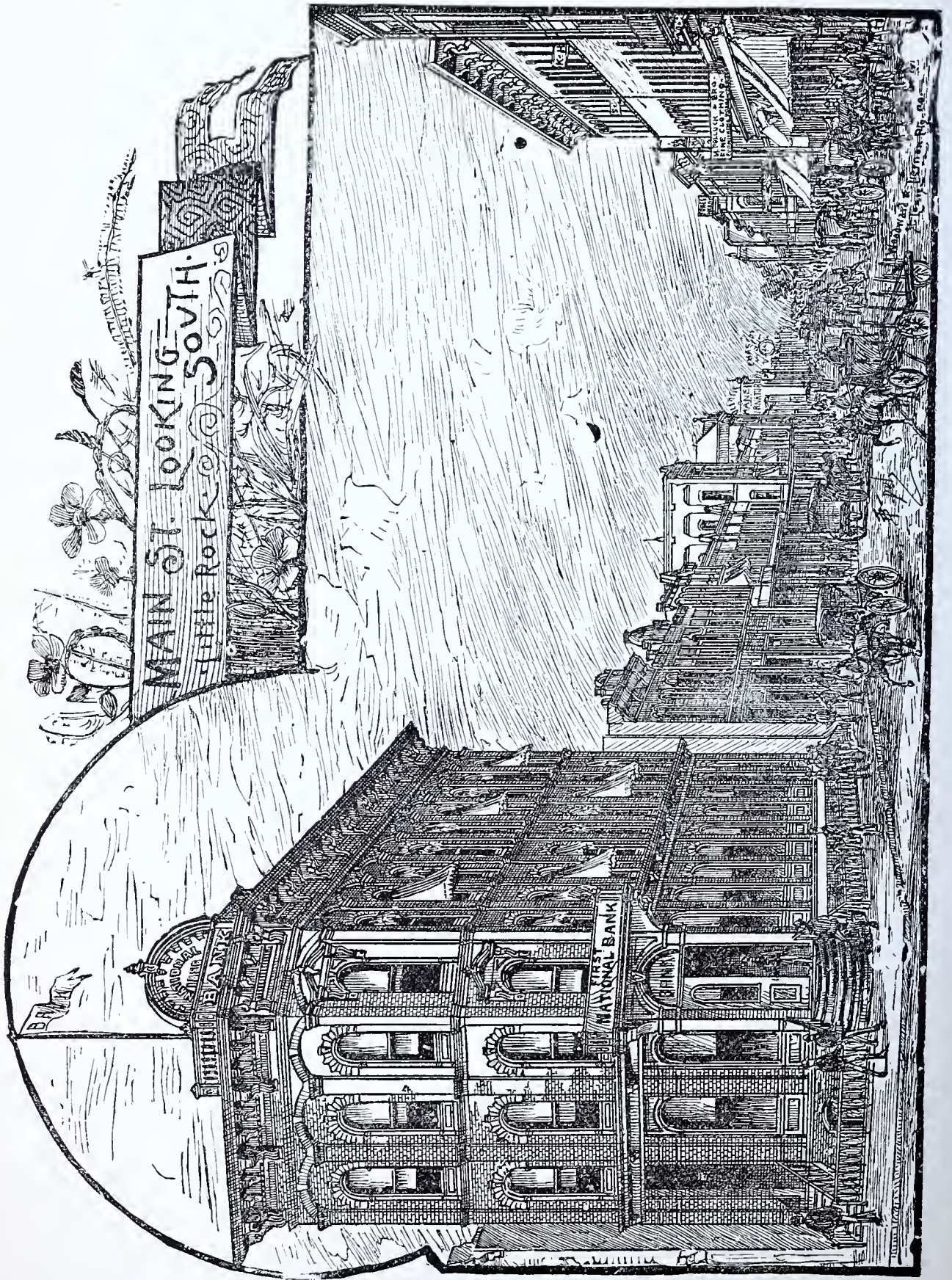
DESCRIPTION OF

LITTLE ROCK,  
FORT SMITH,  
PINE BLUFF

AND JEFFERSON COUNTY.









# LITTLE ROCK.

PREPARED BY THE LITTLE ROCK COMMERCIAL LEAGUE.



HEADQUARTERS  
LITTLE ROCK COMMERCIAL LEAGUE.

Little Rock is the Capital City of the State of Arkansas and the county seat of Pulaski County. It is also the geographical, educational, legal, business and manufacturing center of the State, and the largest city. It lies 345 miles southwest of St. Louis, 487 miles northwest of New Orleans, 366 miles northeast of Dallas, and 135 miles southwest of Memphis, and is the only city of much importance between all these points. It is located on the banks of the Arkansas River, which gives it competing water rates. The country surrounding it is mountainous in every direction excepting the east, where the large cotton plantations lie. It is situated on a bluff with fine natural drainage, is well sewered and paved, both as to streets and sidewalks. These latter improvements have taken place, practically, since the spring of 1887.

## RAILROADS.

Railroads enter the city from every direction. The Missouri Pacific system has lines to St. Louis, Memphis, New Orleans, Texas and Kansas City; running out in five different directions. The St. Louis Southwestern Railway has lines North and South, and the Little Rock & Memphis Railroad Company has a line to the East. Still another line is building and is now within twenty miles of Little Rock, which, when completed, will give an additional Northern and Eastern connection with the Illinois Central system at Helena, Arkansas.

## MISSOURI PACIFIC SHOPS.

The railroad shops of the Missouri Pacific Railway are located here and employ 800 men. The shops of the Little Rock & Memphis Railroad are also located here and employ large number of men.

## ELECTRIC STREET RAILWAY.

Little Rock has, without any question of doubt, the finest system of electric street railways in the United States. All the cars start from the corner of Main and Markham Streets, that being the banking center of the city. These cars run in seven different directions to suburbs of the city.

## ELECTRIC LIGHTING.

Little Rock is said to have more thorough electric lighting, and more electric lighting, proportionately to its population, than any city in the Union. There are three private companies operating plants for supplying electric lighting, both arc and incandescent; and, besides these, the city owns and operates its own plant for street lighting.

## TURNPIKES.

Turnpikes radiating in six different directions furnish beautiful country drives, as well as magnificent roads for the farmers to market their produce.



## CAPITOL.

The Capitol Building, being the headquarters of the State officers and the State Supreme Court, is beautifully located in the heart of the city, on the bluff overlooking the Arkansas River.



## COUNTY BUILDINGS.

The Pulaski County Courthouse, the headquarters of the county officials, is a handsome structure, built of granite blasted from Fourche Mountain just south of the city. The County Jail and County Hospital are modern buildings of recent construction, good design and well equipped.

## STATE BUILDINGS.

All the State buildings, with the exception of the State University, are located at Little Rock. The Insane Asylum buildings present a very imposing appearance on the hills in the west side of the city, and have magnificent quarters, sheltering about 700 inmates. The home for the Deaf Mutes is on a hill also in the western part of the city, overlooking the Arkansas River and new Army Post. The Arkansas School for the Blind is in the southern part of the city. These institutions are well managed, as are all of the State institutions. The State Penitentiary is also located at Little Rock; its 800 convicts having recently been turned over to the State by the lessees, who formerly held them under contract.

## UNITED STATES BUILDING.

The United States Government has a very handsome building here, sufficiently large to accommodate the Post Office, United States Land Offices, United States Courts, Collector of Internal Revenue and the United States Marshal's offices.



BOARD OF TRADE.



MASONIC TEMPLE.

## OTHER PUBLIC BUILDINGS.

There are some other public buildings—the City Hall, the Board of Trade and the Masonic Temple; the latter building being the largest in the State.

## HOTELS.

There are four first-class hotels—the Richelieu, Capital, Pratt's and Gleason's; the first three being on the American and the latter on the European plan. In addition to these, there are several smaller hotels in the city.

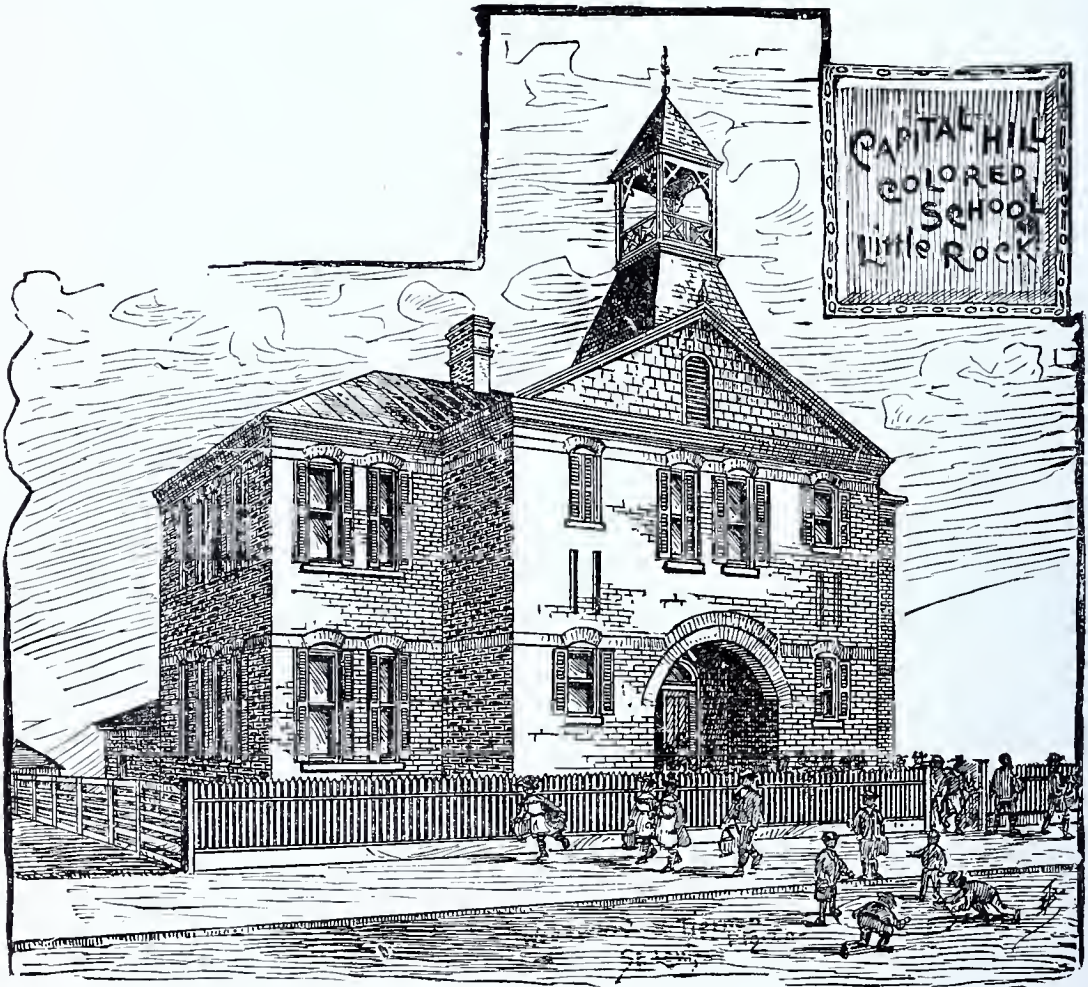
## RESIDENCES.

While there are not many very expensive residences in the city, Little Rock is distinctively a city of homes, as nearly all the population own their homes. The proportion of rented houses, to the entire number, is relatively small. There are a number of beautiful residence streets, with large yards and grounds in front of the houses; the attractive trees and shrubbery which adorn them, add much to the beauty of the city.



## PUBLIC SCHOOLS.

The Public Schools of the City of Little Rock are thoroughly organized, and up to date in every respect; the buildings are new and of modern design. The staff of teachers is the best that money can command. The School buildings are built of brick, well ventilated, and are located in different portions of the city, according to the center of population, affording facilities for educational advantages to both the white and colored races.



## COLLEGES.

There are several Colleges in the city, the principal ones being the Little Rock University and Philander Smith College, the latter being for the colored race. Besides these public institutions, there are a number of excellent private schools.

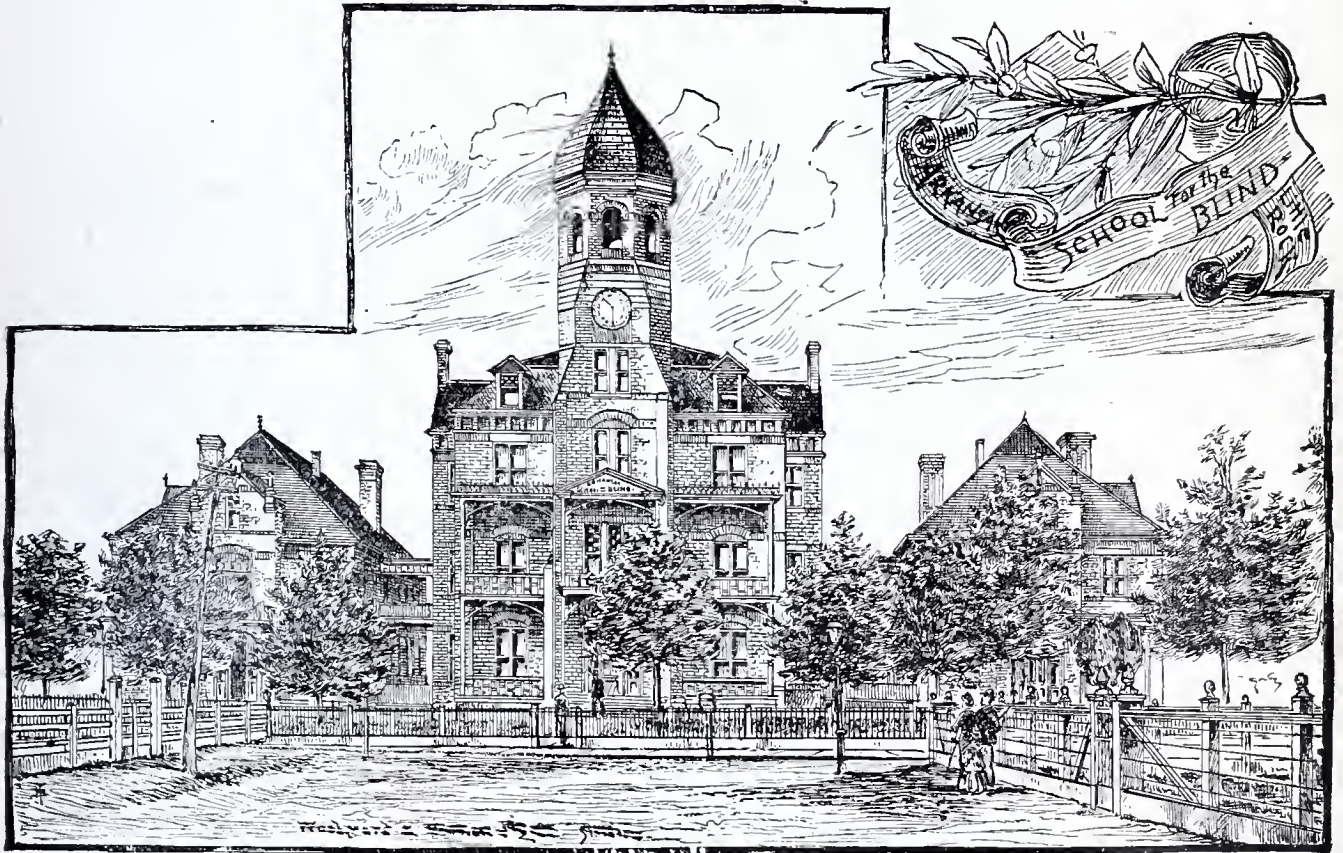
## PARKS.

The city has acquired, almost in its center, 39 acres of land for a park, and provision has been made for an annual tax for five years, which will furnish a sufficient amount to beautify and improve these grounds. This will be known as Arsenal Park. There are also several private parks in the city.



## ARMY POST.

The United States Government has recently acquired title to 1,100 acres of land adjacent to and overlooking the city, which is on a commanding eminence known as Big Rock, rising abruptly from the Arkansas River several hundred feet, and gives a fine view not only of the city but of the entire surrounding country. The United States Government purposes spending over \$1,000,000 on the grounds, and will keep at the post 3,000 soldiers, making it one of the largest posts occupied by United States troops.



## CHURCHES.

Little Rock may well be called the City of Churches. There are now upwards of thirty within the city limits, of all denominations; the buildings being, in the main, handsome structures.

## WHOLESALE BUSINESS.

The business of the city is represented by every branch of trade. Wholesale Grocers predominate; there being also wholesalers in dry goods, hardware, hats, fruits, drugs, etc. The retail establishments of Little Rock will compare favorably with any of the larger cities.

## REAL ESTATE.

Real estate in Little Rock is not high. The city has never had a boom, and the steady advance in prices, even during the depreciation of the last three years, attests the stability values. The highest priced business property in the city is not more than \$600 a front foot, while residence property on handsomely paved streets does not exceed \$60 a front foot in value; other properties range down from these prices to the low priced suburban property.



## BANKS.

There are two national banks, three State banks and several private banks here, whose aggregated capital is upward of \$1,000,000.

## NEWSPAPERS.

The newspapers of the city are *The Arkansas Gazette*, an eight-page morning daily, and *The Arkansas Democrat*, an eight-page afternoon daily. A new afternoon daily has announced its appearance for the near future. Besides these, there are upwards of a dozen weeklies and several monthlies published here.



## WATER-WORKS.

Little Rock has one of the finest systems of water-works and the best water in the country. The pumping station is located on the banks of the Arkansas River above the city; the water is pumped from the river into reservoirs on a hill 300 feet above the pumps. These reservoirs have a capacity of 11,000,000 gallons; the water is then filtered by a mechanical system of fourteen 10-foot New York filters, located on the side of the reservoir hill. Connected with this water-works and filtering system are 36 miles of mains from six to twenty inches in diameter. Again, connected to the mains are 296 double fire hydrants, scattered throughout the city. The direct pressure on the mains in the business portion of the city is from 80 to 90 pounds to the inch. The pumps connected with this system have a daily capacity of 12,000,000 gallons.

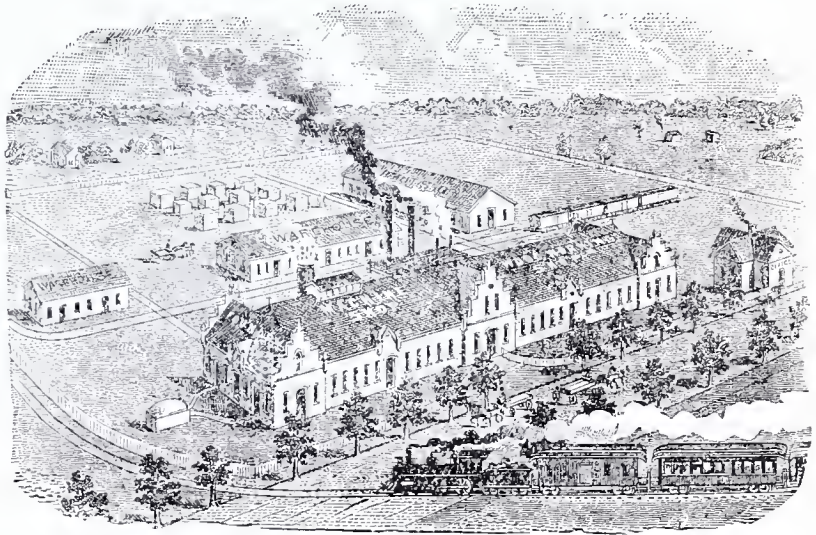


## MANUFACTORIES.

In manufactories the city is rapidly coming to the front. The largest industry is the crushing of the cotton seed and the production of the cotton seed products. The Arkansas Cotton Oil Company operates a mill having a daily crushing capacity of 150 tons of cotton seed. The Southern Cotton Oil Company has in operation a mill of 200 tons of capacity. There are now being erected, and will be ready for business in the fall of 1893, two additional mills; one of the Crescent Cotton Oil Company, with a daily capacity of 60 tons, and one of the Consumers Cotton Oil Company, with a daily capacity of 120 tons. The oil product of these mills is used principally in lard compound. The hulls and a large portion of the meal are used for fattening beef cattle. Every season from 6,000 to 10,000 head of cattle are fattened here for Chicago market; they rank in quality with the best corn fed. What meal is not used in this enterprise is exported to Europe, or to the eastern and middle States, where it is used with hay and other roughness in feeding the native cattle. The linters (being short staple cotton taken from the seed) is largely used in Cincinnati and Philadelphia in the manufacture of cotton batting, cloths, cheap hats and twine; the industry giving employment to hundreds of hands, ranging from skilled mechanics to common laborers.

The best cotton baling press extant is built here. Presses have been made here and put up in sections, for carriage on camels' backs, and sent to Persia. The same company that makes presses, has patents for manufacturing a de-linter for thoroughly cleaning the lint from cotton seed, leaving the seed entirely clean. The lint is largely used in the manufacture of paper stock.

Two factories for building cotton elevators do a large business. A large flouring and grist mill is operated and there are several iron foundries and one cotton mill in the city. Two cotton compresses are located here, one being the largest in the world, the building covering seven acres of ground. There are a number of smaller manufacturing concerns, such as paint works, mattress factory, etc., etc.



Plant of Thomas Manufacturing Co., Largest Cotton Press Builders in the World.

Little Rock has an ice factory with a daily capacity of 130 tons of clear ice, made from distilled water.

There are eight wood-working establishments here, some of them of very large capacity, manufacturing all kinds of wood-work, such as sash, doors, blinds, oil barrels, whisky barrels, flour barrels, pipe staves, heading, barrel headings, spokes, handles and all kinds of wagon material. These industries employ a great many hands. Besides these, there is a furniture company which manufactures furniture, finding a ready sale for its output all through the State of Texas.

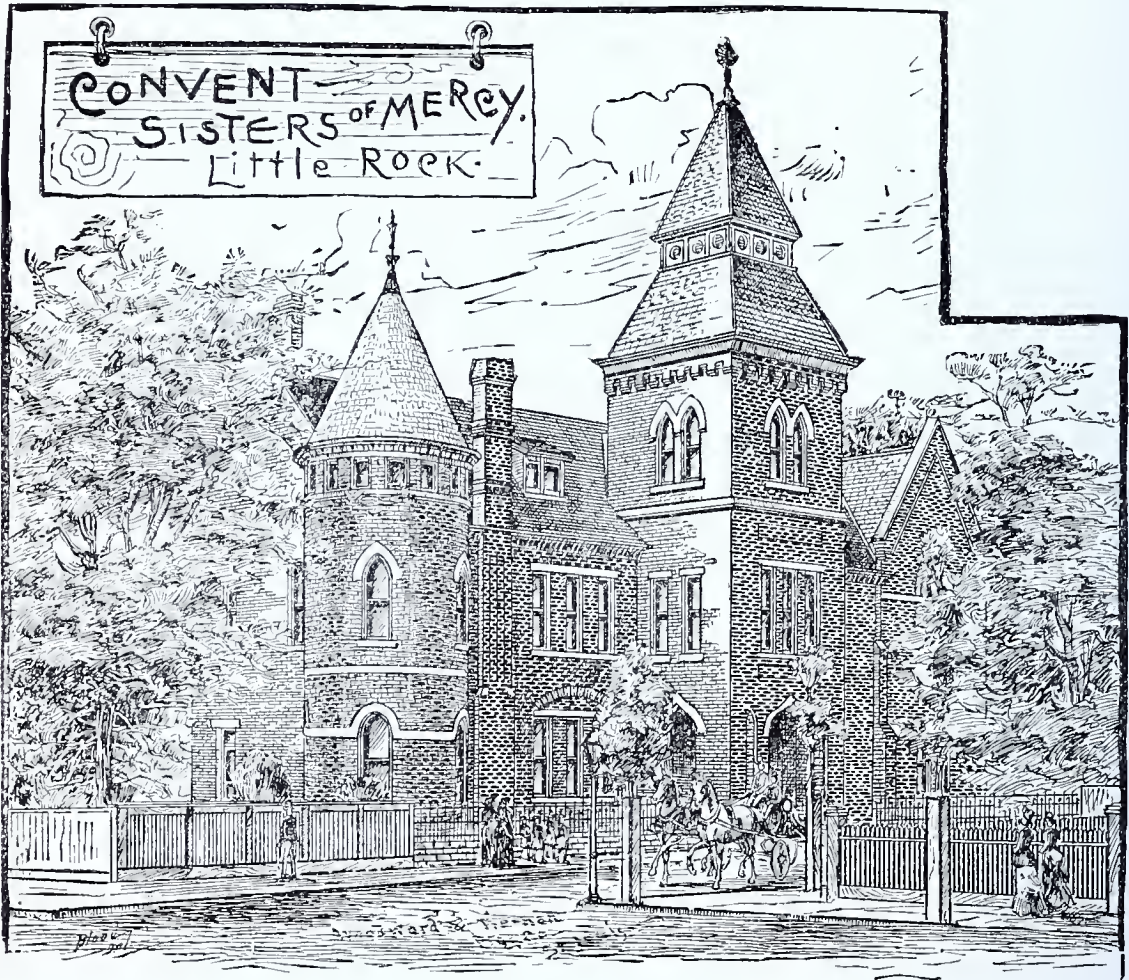


## WATER COMMUNICATION.

By the Arkansas River, water communication is had with St. Louis, Memphis, and New Orleans, as well as with all points on the small tributary rivers within the State. This State has more miles of navigable streams than has any other State in the Union.

## POPULATION.

The population of Little Rock is about 30,000 people: Argenta, now North Little Rock (or the Eighth Ward), having been taken in since census of 1890.



## HEALTH.

The general health is good. From the reports of stations where the United States has troops, Little Rock is given as the healthiest of the stations: the highest death rate in a thousand being 48 at Norfolk, and the lowest being 11 at Little Rock.

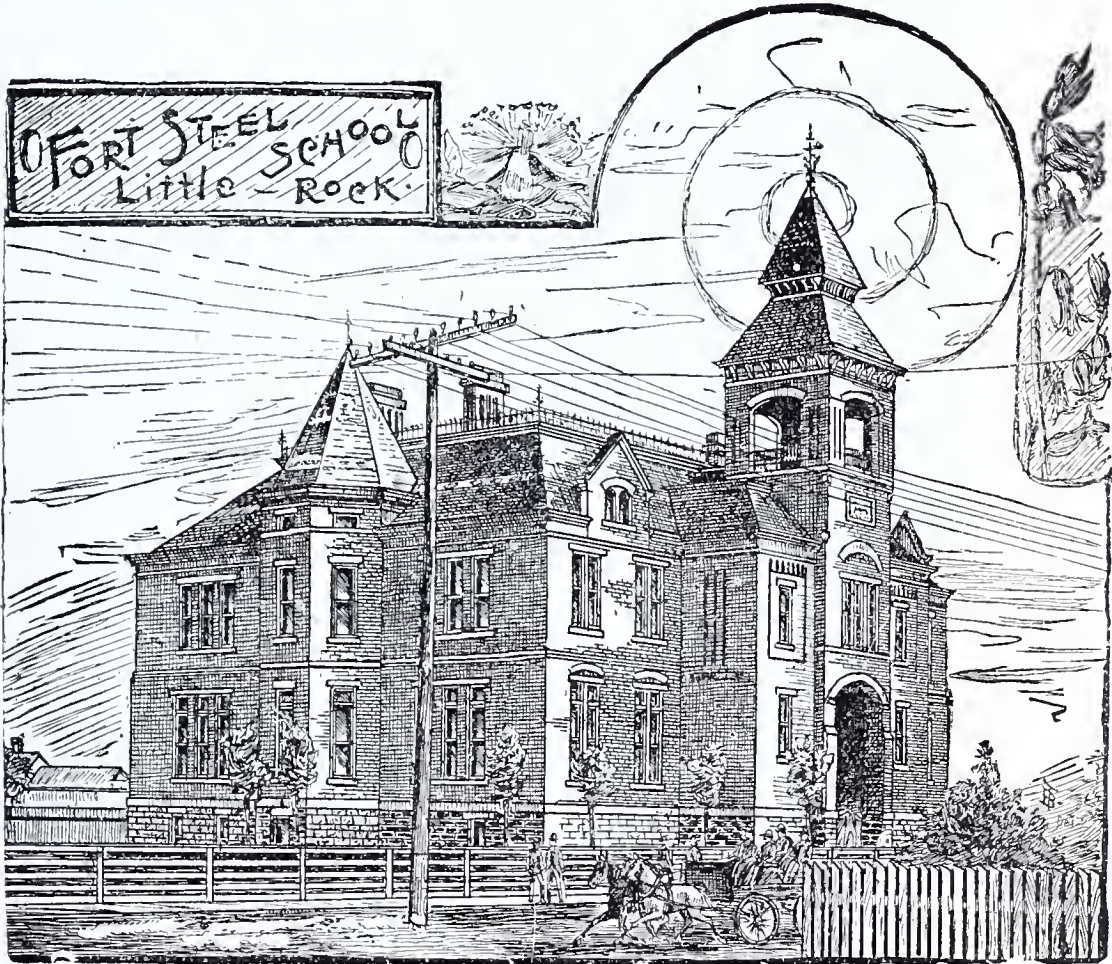
## CLIMATE.

The climate of Little Rock is temperate. Extremes of heat and cold are not known; such a thing as a blizzard or a cyclone is unheard of in these parts. The average temperature for the year, as shown by the reports of the United States Signal Service, is about 61 degrees, which average was taken from a series of eight consecutive years.



## BRIDGES.

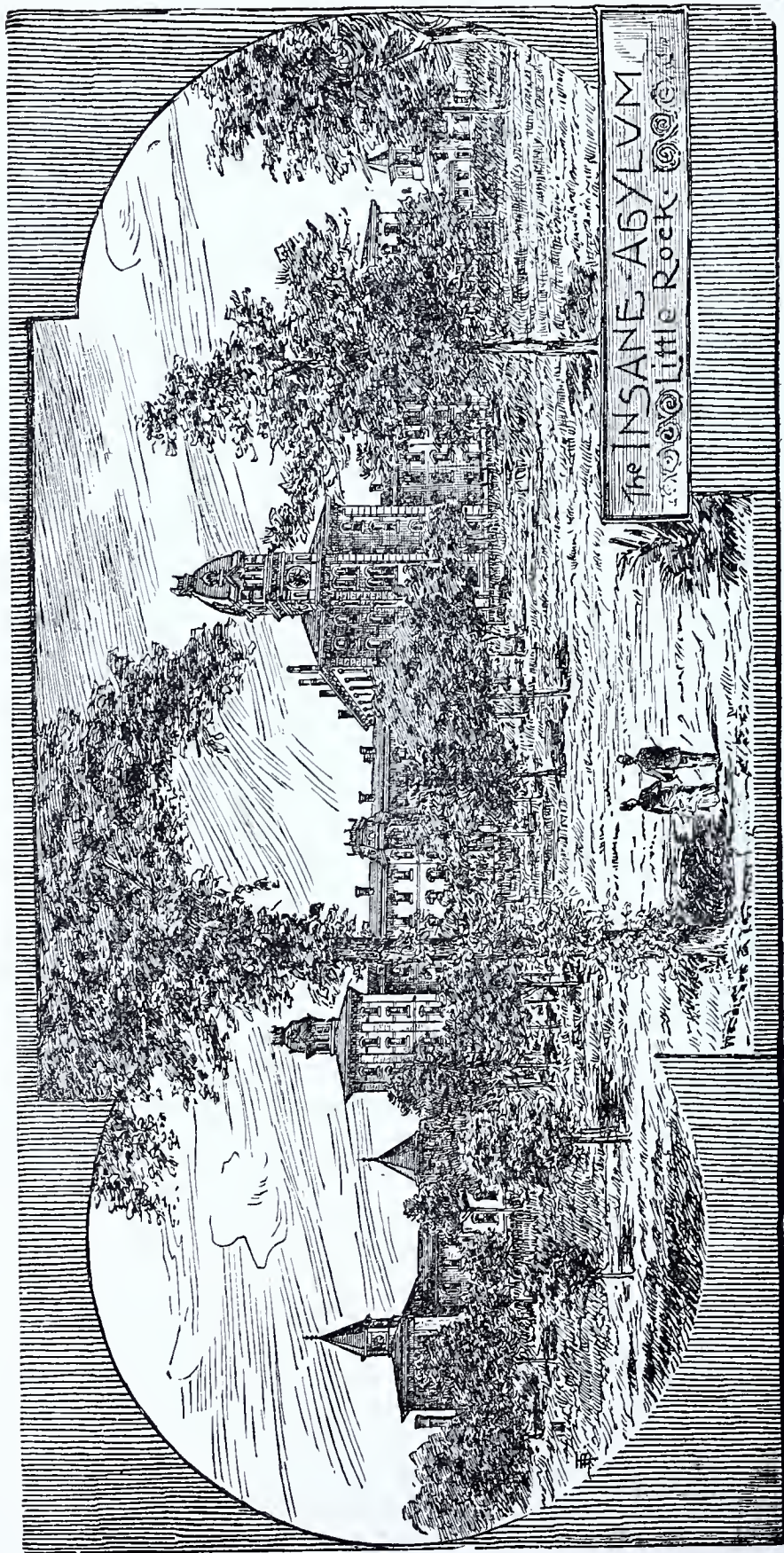
There are two bridges across the Arkansas River here, used both for rail and wagon traffic, and are owned by the Missouri Pacific Railway Company. Advertisements are now out for the construction of a new wagon bridge to be built by the county, which will probably be located between the two present structures. This will greatly enhance the value of property on the north side of the river, and make it much more desirable for manufacturing and warehouse purposes.



## RESOURCES.

The State of Arkansas abounds in all varieties of timbers and minerals, and Little Rock being the geographical and railroad center of the State, is consequently the most advantageous place for any kind of manufacturing enterprise that can utilize any of the products of its arable, mining and timber lands. Steam coal can be delivered at the door of the factory for considerably less than \$2 a ton. Lumber, such as white oak, cypress, yellow pine, red cedar, hickory, etc., is cheaper here than any other place in America. In addition to the above woods, cotton-wood is rafted from the smaller tributaries to the Arkansas River and delivered at Little Rock cheaper than it can be had anywhere else. All woodworking establishments have paid big dividends on the investments, and will continue to do so. Furniture factories, stave and heading works, desk works, handle works and kindred industries, properly managed, can make big earnings. A car works would find its base of supplies here, instead of hauling the timber to Northern factories and paying freight.





## **TAXES.**

Taxes are comparatively light, being 2 cents and 17½ mills on a valuation of less than 50 per cent of trading values. This includes all State, county, municipal and city taxes, and a special tax of five mills for school purposes.

## **BONDED DEBT.**

The total bonded debt of Little Rock is \$135,000. This is infinitesimal on the total assessed values.

## **GRANITE.**

Lying immediately south and adjacent to the city, within two miles of the city hall, are inexhaustible quarries of gray and blue granite. Among the prominent buildings built out of this stone are the county courthouse here and the courthouse at Dallas, Texas. This granite takes a very high polish and finish. The streets of Louisville, Ky., Memphis, Tenn., and Little Rock, Arkansas, are largely paved with this granite. There is none better, either for building or paving purposes.

## **COTTON MARKET.**

The Little Rock cotton market has the finest grades of cotton (outside of the Sea Island cotton) that are grown in the world, being the products of the river and creek bottoms; besides this, the shorter staples can be bought cheaper here than anywhere. Cotton mills, for the making of sheeting, jeans, ticking, cotton cloths, etc., if properly conducted, could not avoid earning dividends.

## **OPPORTUNITIES.**

The State affords abundant opportunities to the manufacturer, the capitalist and the mechanic, or to any one who desires to invest or locate where the conditions of life are comparatively easy. To all such Little Rock extends a hearty welcome. We welcome alike the capitalist or the honest laborer.

Any information desired will be cheerfully furnished by addressing

THE LITTLE ROCK COMMERCIAL LEAGUE,  
Little Rock, Ark.







## FT. SMITH.

### HISTORICAL.

In 1817 the Government established a military post at the confluence of the Arkansas and Poteau Rivers, and called it Fort Smith. The border merchant, attracted by the profitable traffic with the Indians and the safety afforded by his country's flag, soon settled around the fort, and the embryo American city was started.

### TRADING POST.

As a trading post Fort Smith struggled along for many years, gaining slowly in population and trade while waiting for the westward march of steam-transportation.

### FIRST RAILROADS.

The Little Rock & Fort Smith Railway was the first railroad connection, being completed to Fort Smith in 1876. It was followed soon afterward by the St. Louis & San Francisco Railway, which gave a decided impetus to Fort Smith trade, and from 1880 to 1884 her population was more than doubled. Meanwhile, the Government having removed its fort, and having no further use for the ground upon which it was located, donated the site, comprising 360 acres of land, to the City of Fort Smith for public school purposes. The value of this gift may be appreciated when it is stated that less than half of the land has been sold for over \$350,000, and is fairly well covered with handsome residences, public buildings and large factories. This is mentioned as one of the causes leading to the large influx of population which has occurred since 1884, giving Fort Smith in 1893 about 15,000 souls. Other causes which have contributed to the same have been the building of railroads to Paris, Tex., Coffeerville, Kan., Greenwood, Ark., and Mansfield, Ark.; the opening of the mammoth semi-anthracite coal fields of which Fort Smith is the center; the partial development of a few of the many lines of profitable manufacturing that Fort Smith has peculiar advantages for, and the constantly increasing agricultural population in Western Arkansas and Indian Territory, which is almost exclusively tributary to the wholesale trade of Fort Smith.

### SUPERIOR LOCATION.

Fort Smith is particularly fortunate in the absence of rival distributing points. Situated on the western boundary line of the State, where the Arkansas River breaks through the Boston Mountains, she occupies the only spot topographically available for a large city and easily accessible by railroads along that entire border. To the west lies the Indian Territory, a stretch of country nearly 400 miles square, and admittedly one of the most fertile sections of the Union, with Guthrie as the chief town, a place of 5,000 people, 200 miles distant. On the north no town of over 3,500 people for 175 miles, Springfield Mo., being the nearest wholesaling point, and Kansas City, which is 300 miles away, the nearest large city. On the east no town of over 2,000 people exists for 165 miles, Little Rock being the nearest wholesaling point in that direction, and Memphis, which is some 300 miles from Fort Smith, the nearest city of important size; and on the south, 175 miles away, is Texarkana, the only town of commensurate size, with Dallas as the closest large city.

Leaving aside consideration of the tributary Indian Country, which opened to settlement, would of course by itself build its supply point into a large city, and leaving aside all account of its superior manufacturing advantages, which are of equal importance, will not Fort Smith increase in her size and commerce proportionately with the growth of the surrounding portions of Arkansas, now sparsely settled but inviting and beginning to receive



CUSTOMHOUSE, FORT SMITH.

the great influx of population from the colder and less fertile Northern States? And if so, what will her future be when the Indian Territory becomes a State, and her manifold manufacturing advantages have been availed of?

### AGRICULTURAL SURROUNDINGS.

Fort Smith's tributary agricultural country consists of Western Arkansas and the Indian Territory. Western Arkansas land is of two kinds, the valley and river bottoms being one kind, and the hill and mountain lands the other. The former are almost entirely alluvial and are very fertile, producing cotton and corn abundantly. The latter produces wheat, oats, hay, potatoes and fruits, and berries in good quantity. The quality of these products



can be judged from the fact that the premium wheat at the New Orleans Exposition came from an Arkansas upland farm, fifty miles from Fort Smith, and Arkansas apples have carried off first prizes in all contests of the past five years from Boston to California. The Indian Territory farm lands are generally prairie and river valleys and yield cotton and the cereals equally well. The acreage in cultivation in the Territory is increasing marvelously each year and is adding steadily to Fort Smith's distributive area.

The market gardening industry in the vicinity of Fort Smith is assuming large proportions, over 1,000 acres being now planted in fruits and vegetables, which find ready sale in the markets of Kansas City, Omaha, St. Louis, Chicago and other Northern cities. The advantages for this business are peculiarly good in this immediate section, which, sheltered by the mountains, is some three weeks earlier in its crops than the region thirty miles north, and fully six weeks in advance of the latitude of Kansas City, only 250 miles north. The facilities afforded for reaching the markets are good and are being made better each year. Daily trains of express and refrigerator cars now leave Fort Smith in the spring and early summer, arriving in Kansas City and St. Louis in fourteen hours, and Omaha and Chicago in twenty-four hours.

## HEALTH.

The following is quoted from a recent report on this subject by the secretary of the Fort Smith Board of Health, a prominent physician of many years' practice in the city: "There are no diseases especially peculiar to this city or vicinity. Typhoid fever of the kind usual in more Northern latitudes is almost unknown. We have never had an epidemic of diphtheria or scarlet fever, nor has yellow fever ever made its appearance here, this city being out of its zone. This climate is peculiarly favorable to chronic pulmonary diseases, the mountains to the north and west modifying the severe cold and sudden changes of winter, and the period being long in which the people can live in the open air. The mortality rate from all causes for the year 1890, was eighteen per 1,000 of population. This was to some extent increased by the prevalence of *la grippe* (which we are fortunately almost entirely free from this year), and further kept somewhat above the normal by the presence of a large number of witnesses in the criminal cases from the Indian Territory tried before the United States Court here, who expose themselves to sickness and death by their carelessness; and to the further fact that cities or towns having a public charity hospital, as is the case here, draw a certain number of chronic and incurable cases from a large scope of contiguous territory. With an ideal climate, a perfect sewer system, a pure water supply, and no local causes for disease, there is no reason why Fort Smith should not always rank in point of healthfulness among the first cities of America."

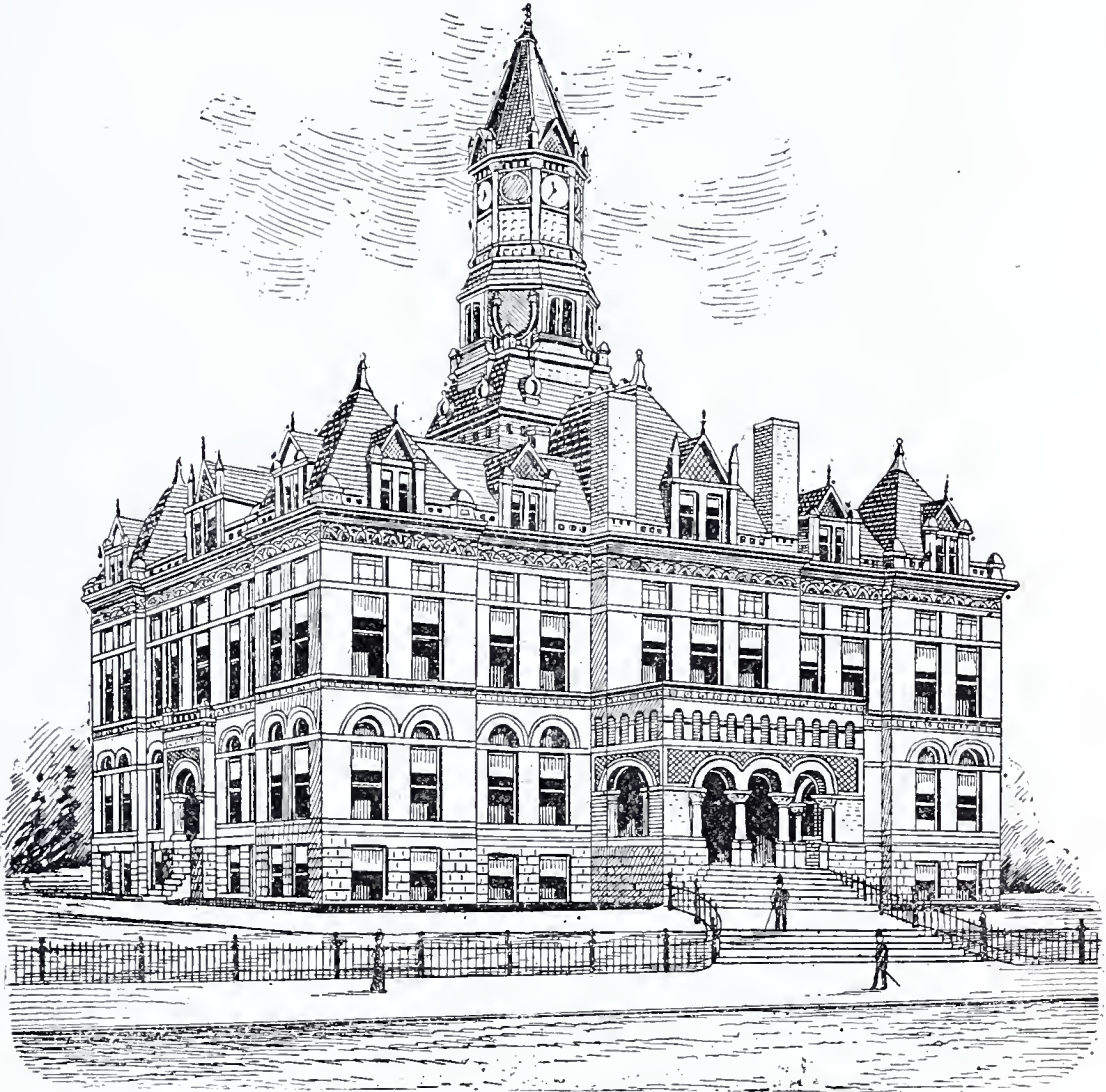
The executions of criminals tried by the United States Court (which has jurisdiction over a large part of the Indian Territory, and consequently the largest criminal docket in the country), also enters into the Fort Smith death rate as given.

It is the boast of Arkansas that she is free from the extreme heat of the South and the extreme cold of the North. The average rain fall is 54 inches, and the average temperature, 62 degrees, the highest during 1890 being 101 degrees, and the lowest 7 degrees.

## PUBLIC CONVENIENCES.

Fort Smith has an excellent sewer system extending over the whole city, consisting of twenty-six miles of sewers. The water-works has twenty miles of pipe laid. The pressure

is so great that fire engines are not used, the fire apparatus being hose carriages and hook and ladder trucks. The efficiency of the water system may best be shown by the fact that during the past three years the total loss by fire did not exceed \$13,635, and that every fire was confined to the building in which it originated. The city is well lighted by gas and electricity, and is perhaps alone in the possession of two complete telephone systems. In addition to the foregoing it has nine miles of street railway, the different lines of which unite in the business portion and diverge to the various resident sections.



COURTHOUSE, FORT SMITH.

Fort Smith has one of the handsomest and best equipped opera houses in the Southwest, which is visited annually by many of the best theatrical attractions in the country, en route to and from Texas and other Southern cities.

### **TRAVELING FACILITIES.**

Fort Smith's completed railroads are the Little Rock & Fort Smith, Kansas & Arkansas Valley, the Atchison, Topeka & Santa Fe, running north into Missouri and south into Texas, and two short roads into the southern part of the county, extending to Greenwood and Mansfield. The Kansas City, Pittsburg & Gulf Railway, now building and completed to



within 100 miles of Fort Smith, is under contract to have its line to the city during the next year. This promises to be one of the important trunk lines of the country, being an air line from Kansas City to the Gulf of Mexico, and the shortest possible route, built on the lightest grades, from the wheat region to tidewater. Another road which has five miles out of Fort Smith already constructed is the Fort Smith, Paris & Dardanelle Railway, projected to run ninety-five miles eastward along the valley of the Arkansas River.

The Arkansas River is navigable for small boats all through the year, and for large steamers from the Mississippi for a part of the year. Before the advent of the railroads regular packet lines plied between Fort Smith and Mississippi River points. The river business is now confined to local trade, which has so increased lately as to furnish a paying business to three boats owned by the merchants. The river transportation gives the city a considerable advantage in the matter of keeping railroad freights on heavy goods reasonable, Fort Smith, as a river town, being used as a basing point.

## MANUFACTURING ADVANTAGES.

The manufacturing advantages of Fort Smith are unexcelled by any point in the country. It has cheap fuel. Water that will not injure the boilers. It has competing systems of railroads in every direction. It has timber in endless variety and almost without limit immediately at its door. The country is rapidly developing and filling up, while there are but comparatively few to take advantage of the splendid openings. The manufacturing that is done here has grown up among our own citizens and almost exclusively on home capital. Every factory in Fort Smith is running to the extent of its capacity, and nearly all of those engaged in manufacturing would welcome others in the same lines.

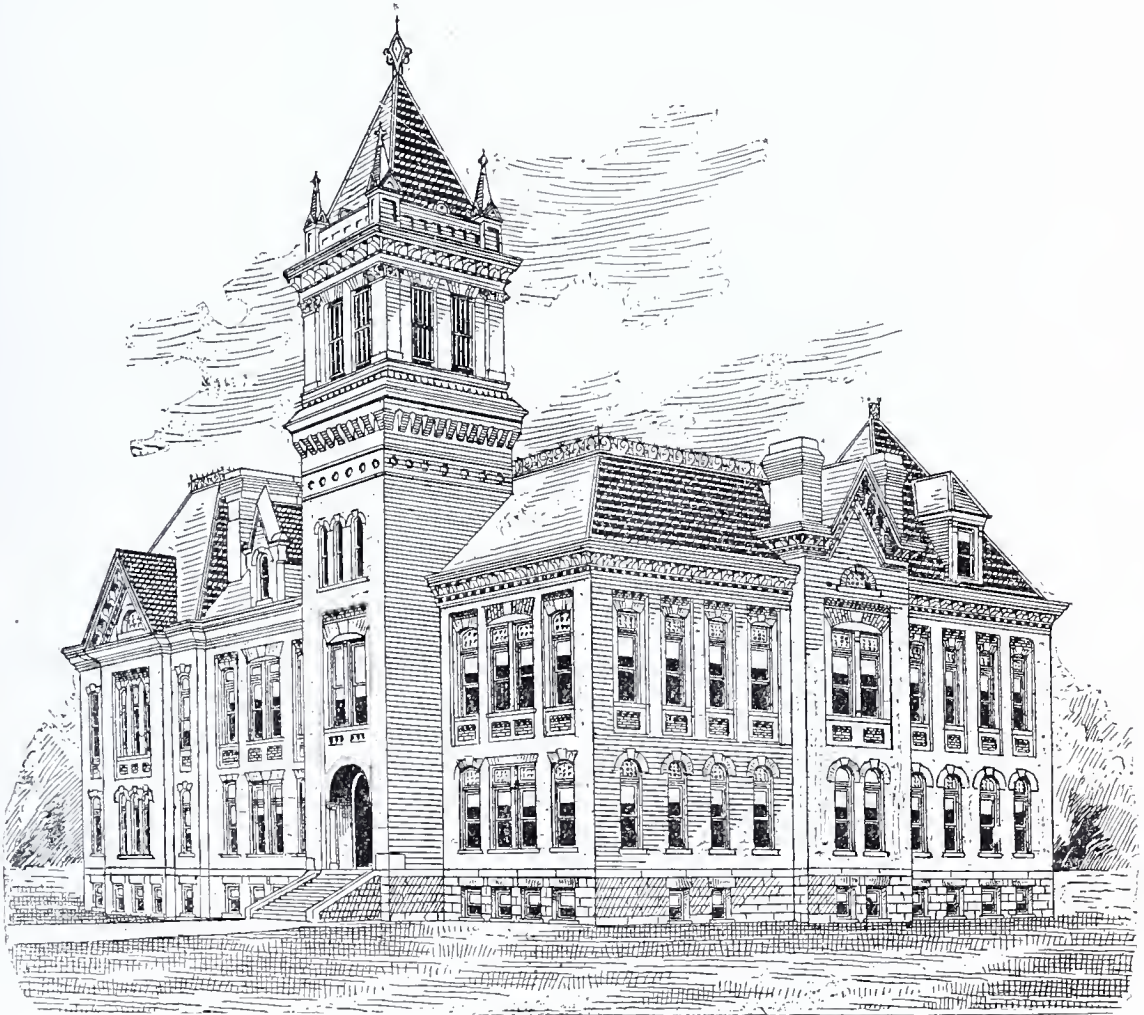
## DESCRIPTIVE.

Fort Smith is situated on the high bank of the Arkansas and Poteau Rivers, the lowest part of it being at least twenty feet above the highest water mark, the greater part of it from fifty to seventy-five feet above. The surface of the ground is such as to furnish excellent natural drainage in every part of it. The corporate line on the west is the line between the State of Arkansas and the Indian Territory. There is no town of 3,500 inhabitants within 165 miles of it. The nearest large city north is Kansas City, Mo.; east, Memphis, and south, Dallas, Texas. Its topographical and geographical situation is all that could be asked to insure its growth almost independent of other surroundings. In 1880 it had a population of 3,000, which, in 1885, had increased to 6,000, and in 1893 to 15,000, of which but about 1,200 are negroes, and the percentage of colored inhabitants is steadily decreasing. But it is not dependent on its situation alone, which is equal if not superior to Kansas City, Mo., or any Western city of that class. It is the center of a fine agricultural and horticultural section of country, in which the length of season is such that with intelligent farming, total crop failures, which so often occur in other sections, are virtually impossible. It is also the entry to the vast coal fields of Sebastian and Scott Counties in Arkansas and the Indian Territory, coal mining being carried on ranging from ten to fifty miles from the city. It is also the gateway to one of the finest mineral regions immediately south of it, where antimony, manganese, fire clay, gypsum and chalk are known to abound, and there is good reason to believe that lead, zinc and iron will be developed in paying quantities, and it is also surrounded with immense forests of valuable timber in almost limitless variety.

## SCHOOLS AND CHURCHES.

There are few, if any, cities of the size of Fort Smith so well provided with school buildings and facilities. It has now six buildings which, together with the grounds, are worth \$175,000. Its advantages do not consist alone in its buildings. The school system is excellent and the teachers of a high order of talent. There are one superintendent and forty teachers employed at an aggregate monthly salary of \$2,630.

In May, 1884, Congress donated to this city the abandoned military reservation, to be sold by the city for the benefit of the public schools. This ground was subdivided into



BELLE GROVE SCHOOL, FORT SMITH.

about 1,200 lots, 50x140 feet. Taking the past sales of a part of this property as a criterion, it is reasonable to believe that a permanent school fund of upwards of \$750,000 will be raised, the use of this being restricted by an act of the General Assembly for the purpose of preserving it as a permanent endowment fund. Properly guarded, the interest of this fund will be sufficient for many years to come to pay all the expenses of the schools in this city.

In addition to the public schools there are two convent schools, a Lutheran school, commercial college, and several private schools.

All prominent denominations are represented by churches, there being fifteen buildings, aggregating in cost about \$125,000.



**COAL.**

This, perhaps, one of the greatest of civilizers, abounds at the very door of the city. The greater part of Sebastian County (in which Fort Smith is located) and Scott County, immediately south, is underlaid with coal, varying from thirty-two inches to seven feet in thickness. The coal in Sebastian County is found and mined within three miles of this city and at various other points in the county. The thickest veins now being mined are at Huntington. Greenwood and Jenny Lind basins, but equally as good basins have been found in other parts of the county not yet reached by the railroads. This coal is of that peculiar character called semi-anthracite. When properly mined it is free from sulphur. It is almost smokeless in burning and burns to an ash nearly as soft as wood ashes. Its analysis shows that it contains eighty per cent of fixed carbon, thus making it in all respects equal to and in some respects superior to the best steam-producing and domestic coal found in any other section of the country. The following is an average analysis of Sebastian County coal:

Fixed Carbon .....	79.853	Sulphur ..	1.680
Ash.....	5.999	Vol. hydro. carbon.....	11.553
Water.....	.915	Specific gravity, 1.327.	100.000

Good steam coal from these mines can be laid down at Fort Smith at eighty cents per ton. In Scott County, through which the Fort Smith & Southern Railroad is now building, are large fields of excellent gas and coking coal. In addition to this, in the Indian Territory, on the railroad running from Fort Smith, Ark., to Paris, Tex., there are immense fields of gas and coking coal of the finest quality. In these fields there are two veins, each four feet thick, forty-two feet apart, dipping at an angle of thirty degrees. The nearest mine opened into this coal is about twenty-eight miles from the city. The output of coal in Sebastian County alone, during the past three years, has increased from 300 tons per day in 1887 to 5,000 tons per day in 1893, and will, within the next three years, be more than doubled.

**WHOLESALE AND JOBBING.**

Five years ago but comparatively little jobbing was done in the city. There are now in the city four exclusively wholesale groceries, two exclusively wholesale dry goods houses, one wholesale boot and shoe house, one wholesale clothing house, one exclusively wholesale hardware house, two wholesale liquor houses, one wholesale drug house, one wholesale crockery house, having a capital of upwards of a million dollars. In addition to these, there are twelve other establishments, the business of which is largely in the jobbing line. The field for this kind of business is almost limitless, and is constantly growing. The Indian country is rapidly settling up. There are already upwards of four times as many whites as Indians in the Territory, and it will doubtless be opened fully to settlement within five years. The new railroads being built will add very largely to the Territory legitimately belonging to the Fort Smith merchants. This class of business need only be limited by the amount of capital invested in it and the enterprise with which it is pushed. It has more than doubled within the past year and is steadily and rapidly increasing.

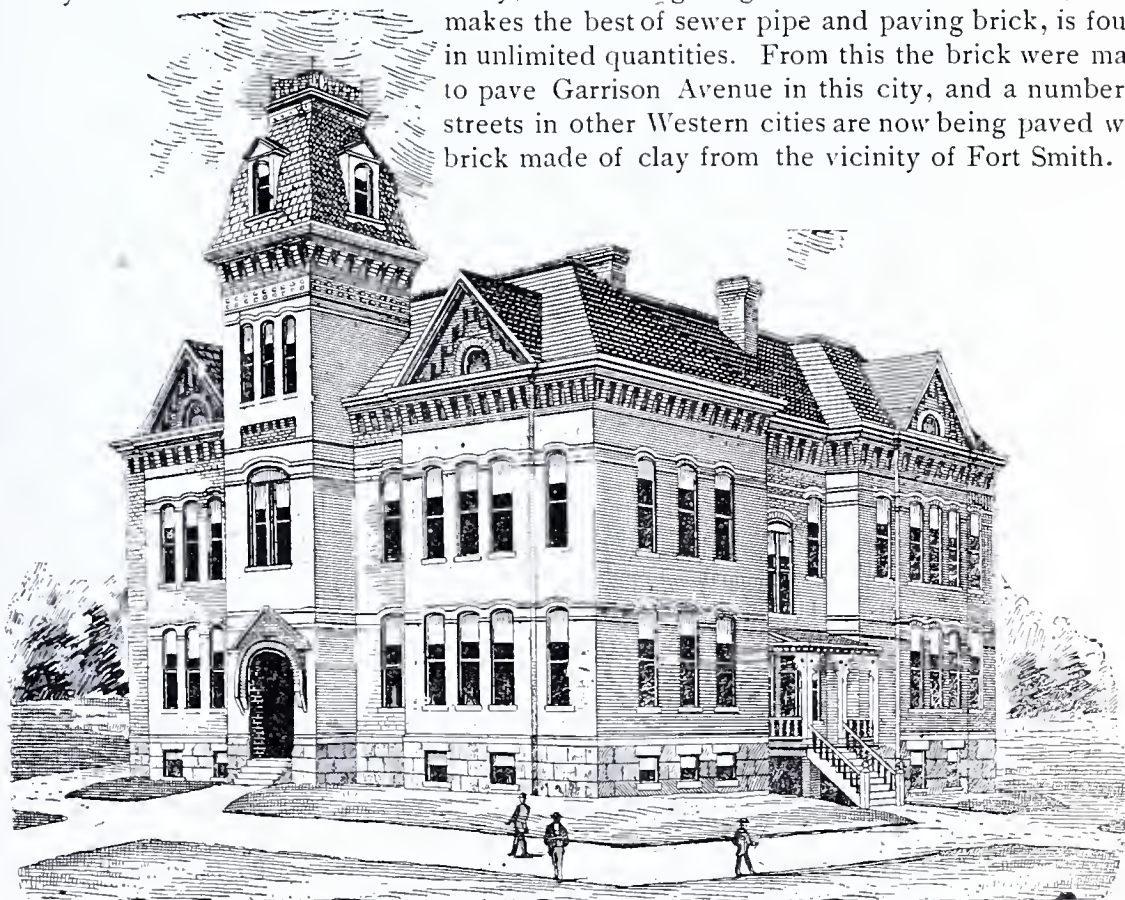
**MATERIALS FOR MANUFACTURING.**

Many of the raw materials which abound in the county surrounding Fort Smith are undeveloped, owing in some cases to remoteness from transportation, and in more cases to lack of time, knowledge and capital on the part of our present citizens to investigate them. With the increased railroad facilities of the lines now building the first of these causes will be removed, and the opportunity is open to the reader to benefit himself in the removal of the second.

The finest soft manganese (pyrolusite) is found in the country south of Fort Smith, and fifty miles beyond perhaps the largest deposit of antimony (stibnite) in the United States is located. The lead and zinc ores in the northern part of the State are now being for the first

time developed, and in that section and Southwest Missouri the mining is already extensive. The ores are mostly being shipped to LaSalle, Ill., for treatment, although Fort Smith, with its cheap and unsurpassed fuel and close proximity, affords good opportunity for the location of reduction works to handle them. Gypsum, marls, chalks and marbles, exist in the country tributary to Fort Smith, but have never been developed. The above are some of the raw material as yet new and untried. There are many whose present supply is unlimited and which can be very profitably manufactured at this time in Fort Smith, among them are the numerous clays found in the vicinity of Fort Smith, only one or two varieties of which have as yet been utilized. The shale-clay, known to geologists as the Akron shale, which

makes the best of sewer pipe and paving brick, is found in unlimited quantities. From this the brick were made to pave Garrison Avenue in this city, and a number of streets in other Western cities are now being paved with brick made of clay from the vicinity of Fort Smith.



DeVAL SCHOOL, FORT SMITH.

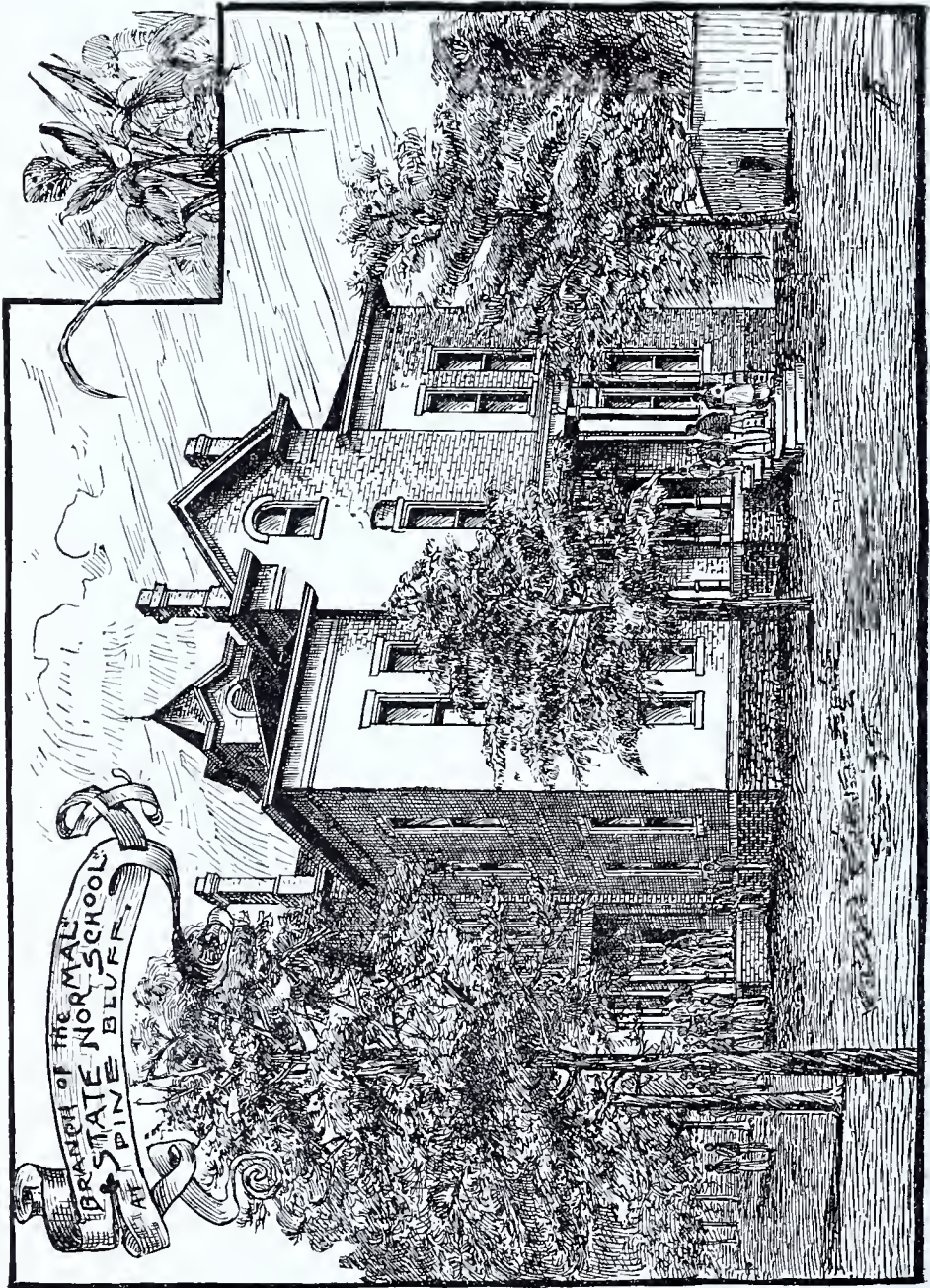
Few realize the value of these clays. Two large plants are now running to their fullest capacity in the manufacture of paving brick alone, and a third one is now being put in, and they have orders enough ahead to keep them at work for a year. The demand for a good paving brick is so great and the material from which it can be made is found in so few places that this industry alone will, from the present outlook, employ 1,000 men at Fort Smith in a very few years. The analysis of the shale used for this purpose, as given by Prof. Branner, State Geologist, is as follows:

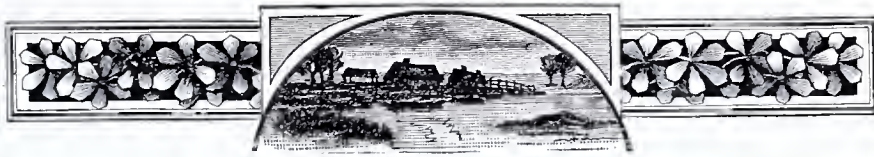
Silica.....	58.43 per cent.	Soda .....	1.03 per cent
Alumina.....	22.50 "	Sulphur.....	0.16 "
Oxide of Iron.....	8.36 "	Loss on ignition.....	6.87 "
Magnesia .....	1.14 "		"
Potash .....	2.18 "		"
			100.99 "

Brick made from this clay and tested at the School of Mines, Columbia College, New York City, stood a crushing stress of 170 tons, or more than 5,500 pounds to the cubic inch, very nearly as much as the hardest of granite will stand.

Any further information concerning Fort Smith will be cheerfully furnished upon application to Chamber of Commerce, Fort Smith, Ark.







## PINE BLUFF.

Pine Bluff is the only city in Jefferson County. It is one of the three principal trade centers of the Valley of the Arkansas River, the other two being Little Rock and Fort Smith. It has a population of 12,000 and is rapidly growing. It differs from many cities of the State, in commanding a larger area of trade than is common. It is estimated that one-third of the commerce of the alluvial delta of the State is controlled by citizens of Pine Bluff. In ascending the Arkansas River, it may be said to be the dividing limit of the upland and lowland country. Citizens of Pine Bluff own 206,420 acres of the farm lands of the county, and receive a rental of over \$500,000. The timber distribution controlled by the city is difficult to estimate; the number of sawmills on the St. L. S. W. Railway, tributary to it, is 80, with a daily cut of 1,000,000 feet. The number of sawmills on the Valley Route, known also as the L. R., M. R. & T. Railway, is 20, with a daily cut of 300,000 feet. The product of these mills, chiefly pine lumber, though diverted at the extremes to other cities, is fairly within the reach of Pine Bluff.

The amount of cotton handled by Pine Bluff merchants for the year ending September 1, 1892, is given at 100,000 bales, worth \$4,000,000.

The growth of the city has been rapid for the past seven years. The St. Louis Southwestern Railway has its general machine shops here, and disburses annually for station service the sum of \$780,000. Its works are being enlarged, so that a much larger force of workmen will soon be employed. The development of the uplands and bottom lands tributary to the city is another source of growth to it; while the universal feeling of confidence has called into action many hitherto latent powers.

The town of Pine Bluff, having been surveyed by John E. Graham, was incorporated in 1836, and embraced only forty-five blocks. The area of the city is now one and three-quarter miles wide and two and one-half miles long, and embraces 2,600 acres of land.

### TRANSPORTATION BUSINESS.

Estimated business done at Pine Bluff by the St. Louis Southwestern Railway, during the year ending June 1, 1893:

BUSINESS RECEIVED.		BUSINESS FORWARDED.	
800 cars lumber.....	20,369,515 feet.	200 cars lumber.....	5,530,432 feet.
2,000 cars various merchandise.....	67,910,889 lbs.	1,612 cars various merchandise.....	33,435,312 lbs.
12,000 bales cotton.....	5,530,432 lbs.	24,000 bales cotton.....	11,777,543 lbs.

### THE PINE BLUFF & EASTERN RAILROAD.

This road has at present only 30 miles of road built, but passes through a rich cotton region and handles a large amount of freight, chiefly cotton and cotton seed, though merchandise and plantation supplies are also shipped. It connects with the St. Louis Southwestern Railway, eight miles from Pine Bluff, and has facilities for through freight. The amount of gross earnings are about \$30,000.



## MISSOURI PACIFIC R. R.

FREIGHTS FORWARDED PAST 12 MONTHS.		FREIGHTS RECEIVED PAST 12 MONTHS.	
Lumber .....	720 cars.	Lumber .....	600 cars.
Live stock .....	150 "	Live stock .....	156 "
Mdse, grain, hay, meal, meat, flour, etc....	2,450 "	Mdse, grain, meal, sugar, molasses, etc..	3,050 "
Cotton bales per season, Sept. to Sept....	40,000 bales	Cotton bales per season, Sept. to Sept....	15,000 bales.
Tonnage on above:		Tonnage on above:	
Lumber .....	27,600,000 lbs.	Lumber .....	24,000,000 lbs.
Live stock.....	3,300,000 "	Live stock.....	3,432,000 "
Mdse, grain, hay, meal, meat, flour, etc	54,600,000 "	Mdse, grain, meal, sugar, molasses, etc	73,203,000 "
Cotton bales .....	20,000,000 "	Cotton bales per season, Sept. to Sept.	6,510,000 "
Total tonnage.....	105,500,000 lbs.	Total tonnage .....	107,145,000 lbs.
Passenger traffic per annum.....	\$5,900		

## JEFFERSON COUNTY.

This county, which is now to engage our special attention, possesses many attractive qualities. Its location is in Southeastern Arkansas, where is situated the richest corn and cotton lands. A view of the map will show how it is divided midway by the Arkansas River, whose numerous landings for steamboats afford facilities for travel and transportation.

The latitude of Pine Bluff, the capital and center of the county, is 34 degrees north, and longitude 15 degrees west from Washington. The county is 29 miles square, containing 841 square miles, or 538,240 acres. Its population, white and colored, in 1870, was 15,714; in 1880, 24,000; in 1890, 40,821. The colored people form three-fourths of the population. Their preponderance up to the present time is owing to the richness of the bottom lands, to which they are acclimated, and the almost exclusive growth of cotton and corn, to which their unskilled labor is adapted. These bottom lands are just what similar lands in Illinois were fifty years ago; undrained swamps are close by, and no diversity of crop to call for better labor and better modes of living. The creek bottoms and uplands are best for new white settlers until the lowlands are more open and better drained.

Besides the Arkansas River, Bayou Bartholomew winds its way through the county. There are several mineral springs, though the waters have not been analyzed: White Sulphur, Cantrels, Lees and Germans. Noble's Lake, Lake Dick and Horse Shoe Lake are the only lakes of considerable size.

## LANDS.

All the land on the north side of the Arkansas River is bottom land; almost all on the south side is upland. The following is a classified statement of county lands:

	Acres.		Acres.
Bottom land .....	363,000	Vacant United States land ..	15,000
Uplands.....	175,000	Land belonging to L. R., M. R. & T. Ry....	10,000
Land in cultivation .....	90,000	Acres in cotton.....	67,450
Unimproved land susceptible of cultivation..	370,000		

The bottom land belongs to the alluvial delta and its productive power may be known from the fact that in 1890 the number of bales of cotton made was 75,000. Excepting a

single county in Mississippi, this was a greater amount than was raised in any county of any of the Southern States. The capacity of the county is susceptible of a vast increase. In the bottom lands the soil is sandy, sandy loam and stiff clay; in the uplands it is light, except in the creek bottoms.

## PRICE OF LAND.

To make known to those at a distance the exact price of land, is not possible within the limits of this pamphlet. Very much depends upon the character of the soil, the location and improvements. A fair estimate may be made from this schedule:

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	Per Acre.
Uncultivated and unimproved upland.....	\$ 1.00 to \$10.00
Uncultivated and unimproved bottom land.....	1.00 to 20.00
Improved and cultivated upland.....	2.00 to 30 00
Improved and cultivated bottom land .....	10.00 to 50.00

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## PRODUCTS.

### FIELD.

The climate and soil are very favorable to almost every crop, and no country affords so many days on which outdoor work may be performed. The chief field products are cotton, corn, wheat, oats, rye, sorghum, peas. Several grasses do well: clover, timothy, orchard, redtop and millet.

The most luxuriant native grasses, though natural enemies to cotton, are Bermuda and Johnson. The Johnson grass is an alternative crop and as a fertilizer for corn is good.

### GARDEN.

Vegetables of nearly every known kind grow here planted as early as February. In the bottom lands fertilizing is unknown, but in the uplands it is beneficial. Spring and fall cabbage are easily grown on the same ground. Two crops of Irish potatoes and corn are of frequent occurrence. Cauliflower and kindred plants thrive; 400 bushels of sweet potatoes, 200 of Irish potatoes, 500 of onions and 800 of redtop globe turnips to the acre are not uncommon crops. The climate is so genial to vegetable growth that gardeners as a rule maintain a garden the year round, and every day their wagons are to be seen on the street laden with vegetables. The truck garden industry has developed more in the past five years than any other factor in the advancement of our people, and it is worthy of note that our local gardeners have depended solely upon home patronage. In a little while arrangements with the railroads will be made for regular transportation of vegetables and then the truck gardeners will be able to rely upon a regular market.

## STOCK RAISING.

The luxuriant vegetation of natural and artificial grasses affords excellent grazing for horses, cattle and sheep. Cane, which thrives in lowlands, affords the year round a nutritious food for stock. The Jersey and Holstein breeds of cattle have been successfully introduced for dairy purposes. So far we have not many regularly established stock farms, but the business is beginning to develop. The mildness of the climate saves the great expense of



costly stables, which falls so heavily upon farmers in the North and East. At the same time, stables sufficient to protect against the rain and spells of comparatively cold weather are not to be dispensed with by the wise farmers. Hog raising is also a lucrative business.

## GAME AND FISH.

Wild turkey, deer, duck, geese, and many kinds of small game are found; occasionally bear is met with.

In the numerous small lakes, game fish is found; in the Arkansas River catfish, drum and buffalo are abundant, and easily caught.

## MANUFACTORIES.

The openings for manufactories are numerous. Woodworking, furniture, hub and spoke factories; shingle and sawmills; wagon and carriage factories; not to mention cotton factories, which, when properly organized and worked, would well repay an investment. The year round navigation of the Arkansas River, and the numerous railways, afford facilities for transportation. New enterprises meet with the approval of, and receive material assistance from, local capitalists. Nothing now is so much needed as the establishment of manufactories.

The following are some of the factories now successfully established:

Pine Bluff Mill and Elevator Company; has a daily capacity of 650 barrels of bolted meal and a corresponding quantity of chops, etc.

Riggins' Planing Mill; makes shingles, doors, windows, mouldings, brackets, counters, shelving for drug stores and bars. Deals in rough and dressed lumber.

Bluff City Lumber Company.

The St. Louis Stave and Lumber Company are operating a large plant in the western suburbs of town, with a weekly capacity of 75,000 staves of oak, cypress and heading. New machinery, increasing the capacity, is being constantly added. They find the timber here to be the best of the many plants in the Southwest.

Emma Oil Mill, which ships immense quantities of cotton seed oil, meal, cake, hulls and potash.

Dilley's Foundry.

Ice factory and two large cotton compresses.

Public Steam Cotton Gin, with all modern improvements, and a capacity of fifty bales of cotton per day.

There are several other smaller plants—cigar, broom, carriage, wagon, etc.

## MINERALS.

An inexhaustible quantity of marl is found on the Arkansas River in the northern part of the county, which has never been developed. The beds are on the river bank, and it could readily be transported to market in barges. The vein or bed of the marl runs in a southwesterly direction and crops out on the surface in many places. The L. R., M. R. & T. Railway crosses one part of the vein. Coal and other minerals in small quantities have been found here and there, but no special notice has been taken of them.



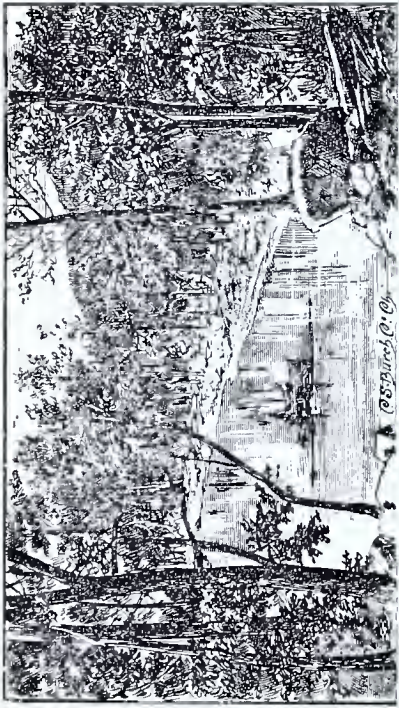
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SHORT ARTICLES  
SHOWING THE  
PRODUCTIONS AND RESOURCES  
OF THE  
STATE  
BY  
SECTIONS AND COUNTIES.

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# NORTHWEST ARKANSAS.

BY A. C. HULL, EDITOR BOONE BANNER.

There are a great number of people from various portions of the Union, wanting information concerning Northwest Arkansas. They are, farmers seeking a home in some more congenial locality; business men who wish to cast their lot with us; capitalists seeking investment for their thousands; all classes and conditions of men, who, hearing of the great advantages of this favored section, fain would strike their tents and like the Arab silently steal away to this goodly land of ours. This pamphlet is issued in order that the world may know what we are and what we have.

Why pry around with a dark lantern and jimmy in the dim moonlight in order to find a change that will lift you out of your present gloomy surroundings, when there are thousands of opportunities being presented in broad daylight right under the glare of the noonday sun? Now, get your map and see where Northwest Arkansas is. When you find it, you will find one of the best agricultural portions of the Southwest—best climate in the Government—no extremes of heat or cold, and no malaria.

No section of the Southwest is growing more rapidly now than Northwest Arkansas. There are good reasons for this rapid advance, prominently among which is our vast mineral wealth, which, until recently, has been overlooked by the capitalist, while fields in other sections have received the entire attention of those wise enough to make the venture of investment in the South.

So successful have been some of our Southern enterprises, that now the tide of Northern and Eastern money, flowing in our direction, grows brighter every day. The desire for profitable investment in the South has caused the mineral regions to be examined and looked into more carefully, all of which has brought to light our vast possibilities; and in consequence of which Northwest Arkansas is beginning to claim its share of attention. Our previous dormant condition has been of such long duration, while development seemed to progress all around us, that now the movement in the direction of development, as started, is most active, and to that extent are we attracting the attention of not only capital, but railroad projects as well, and every week brings numbers of prospectors and capitalists, seeking investment in our hills, and fresh and encouraging news looking to railroad construction through our rich country. And while this state of affairs is indeed encouraging, it is not going to remain so long. It cannot do so—it is impossible. Why? Because a country which continues to attract so much public attention, so much *favorable* and no unfavorable comment, from every point of the compass, a country that fully sustains every report of its wonderful advantages, to all who investigate for themselves, is bound to bring about a still greater revolution, and one that will continue until we have a network of railroads, and every hill almost shall be a mining camp, every valley and plane rich in fruits and products of agriculture, everybody prosperous, and Northwest Arkansas one of the richest countries in the world. In this connection we reproduce a portion of an article which appeared in the *Boone Banner* of issue of March 26, 1891, under the head "North Arkansas Compared with Other Parts":



Capitalists, manufacturers, farmers, miners and home seekers should know and bear in mind that Boone, Newton, Searcy and Marion Counties, Arkansas, four Counties composing a compact body of considerable dimensions in North Arkansas, contain about the largest field and richest deposits of zinc of any section in the United States. And in this estimate we have not included our valuable copper mines, our rich and extensive lead deposits, our hundreds of miles of inexhaustible marble, our mountains of "the precious onyx stone," our pure saccharoidal sandstone from which glass may be manufactured, our wonderful caves that for beauty, grandeur, curiosity, proportions and real worth as pleasure resorts, rival the famous Mammoth Cave of Kentucky, or the Luray Caverns of Virginia. In addition to this, we have the kaolin, the iron, the manganese, the tallow and fire clay, etc., of other sections of the State. And all these rich, invaluable and inexhaustible deposits are imbedded under a section of the most desirable agricultural and fruit lands in the State—a region second to none for the excellence of its farm products.

Northwest Arkansas occupies an elevated depression between the Ozark range of mountains on the north and the Boston range on the south. The mean elevation is about 1,500 feet above the sea level. Springs and streams of pure water abound, all of them tributary to White River, which has its source in Washington County, runs through Benton County into Missouri and enters our State again in the northeast part of Boone, running across the corner of the county, thence through Marion County, and forming the line for quite a distance between Marion and Baxter Counties. Many of the springs possess remarkable medicinal properties, and many of the streams are capable of furnishing unlimited water power for the running of machinery.

This is as healthful a country as can be found anywhere. There are no reasons why it should not be so—there are no natural causes of sickness here—the country is high and well drained, and there are no stagnant waters or swamps of any kind, and the climate is temperate and salubrious. The soil is generally very productive—exceedingly so in many localities, and well adapted to the growth of everything that will grow anywhere else in the temperate zone. Northwest Arkansas is in general a finely timbered country, and our people stand ready on demand to supply our timberless neighbors with any amount of timber of the hardwood varieties.

The writer has never seen a country so well adapted to fruit growing as this is. It seems to be the natural home of all kinds of fruits that grow in the United States. We will be pardoned if we brag about our fruits and minerals, for the fruits have taken the highest premiums wherever they have been exhibited, and the mineral specimens are now on exhibition at Chicago that *will* take the premiums. But we will pay particular attention to these two products later on. The general characteristics of the counties in Northwest Arkansas are very much the same. Some of them have fertile lands, a greater population and better outlet to the outside world than others, otherwise what is said of one may be said of another.

## GENERAL RESOURCES.

The material resources and advantages of this region are yearly becoming more apparent. Its river valleys are among the most fertile in the world; its great prairies are covered with thrifty homes, and afford rich pasturage for stock; its extensive forests yield every variety of wood which man can utilize, and its hills and mountains are treasure houses of valuable ores. In many of the world's great expositions, displays of our agricultural products have taken rank with those of California, Illinois and other States famed for their products of the farm. Cotton and hay in the south, and lumber, cereals, minerals, and fine-blooded stock in the north, make our State well adapted to the material wants of man. Railroads traverse most of the State (Northwest Arkansas containing the largest belt of country in the State not traversed by railroads), and there are several large cities within the State's borders.

In regard to climate, we are situated in a country where is effected the transition from the freezing blasts of the North to the torrid atmosphere of the South. Here, in this salubrious clime, the happy farmer can, in a literal sense, "sit under his own vine and fig tree," beneath the arching canopy of skies which rival in beauty the soft, azure skies of Italy. Protected alike from the extremes of heat and cold, by the forest-clad hills, he can live in peace and plenty, and enjoy the fullness of Nature's lavish gifts. This is no Eden, however; and while we do not claim it to be the best country in the world, we can safely say that it has no superior, concerning its varied advantages and unlimited resources.

Arkansas has been maligned and underestimated by rival States in the North, but now she is emerging from this false obscurity, and shines as bright as any star in our national constellation. In education, in agriculture, in art, in business tact and ability, in all that conduces to the material prosperity and wellbeing of a commonwealth, she is unexcelled. If you are a farmer, and want a peaceful home in a fruitful land, come to Northwest Arkansas; if you are a merchant, and desire a lively trade, come: if you are a professional man and would make a success of your business, come: if you are a capitalist seeking a paying investment, come to Northwest Arkansas. But do not come with the expectation that dollars grow as spontaneously as do our wild fruits, for they do not: you must work for them the same as in any other country. Yet, we say a comfortable living can be had here with as little labor as anywhere. We invite all to come and see.

## COUNTIES.

That part of Northwest Arkansas north of the Boston Mountains is composed of the Counties of Boone, Baxter, Benton, Carroll, Madison, Marion, Newton, Searcy and Washington.

### BOONE COUNTY.

BOONE is the sixty-third county in the State in the order of organization. It was organized August 9, 1869, from territory taken from Carroll and Marion Counties, and having an area of 648 square miles. It is a northwestern county, and is almost square. It is bounded on the north by Taney County, Missouri, on the east by Marion County, south by Searcy and Newton Counties, and west by Carroll County. It is situated in latitude 37° N., and longitude 16° W. from Washington. When the county was organized, the seat of justice was temporarily established at the house of H. W. Fick, but it was soon after removed to Harrison, which is still the county seat.

### ITS TOPOGRAPHY.

Boone County lies in that great semi-plateau which stretches from the Ozark Mountains in Missouri, to the Boston Mountains in Arkansas, and embraces a large portion of the renowned valleys and fertile prairies of North Arkansas. The country is diversified with forest and prairie, with upland and valley, with Alpine scenery and broad-stretching, fertile homesteads. About one-fifth of the area of the county, or 83,000 acres, consists of undulating, gently rolling prairies, covered, when not in cultivation, with luxuriant native grasses. The main prairies are Baker, Rolling, Huzza, Gaither and Marshall, and these are covered with large, well-fenced, well-tilled and productive farms; here are broad fields of corn, wheat, oats and other cereals such as are found in the North and West, famed as the granaries of the world: here are as good roads as can be found anywhere: here are extensive meadows



teeming with their wealth of sweet-scented clover, timothy and other tame grasses, which grow here in abundance; here are large, commodious frame residences, while near by may be seen the rude log cabin which served as a home for the hardy pioneer who first set foot in these wilds, determined to wrest a home from the bountiful, but yet undeveloped, treasures which Nature had vouchsafed this favored section, and who, surmounting all the difficulties which beset the early home seeker, is now enjoying the fruits of his labor in peace and plenty.

The forests consist mainly of oak, of which there are seven distinct varieties, hickory, ash, sycamore, elm and many other deciduous trees, besides large areas of pine and cedar lands. Our pine is the source of much of the wealth of the county, and there are several sawmills kept busy in supplying lumber for the home demand.

The county is well watered with numerous springs, brooks and creeks, which flow from almost every hillside. White River, a tributary of the Mississippi, flows through the northeast corner of the county: Long Creek in the north, is a fine stream; farther south we come to Bear Creek, fed by the exhaustless fountain of Bear Spring; next we find Crooked Creek, a large stream which rises near Gaither Mountain in the southwest part of the county, and flows in a northeasterly direction, and finally empties its waters into White River. Besides these, there are numerous small rivulets and rills, such as the poet tells us about, abounding with fish and watering the fields through which they flow. The valleys of the larger streams are generally wide and very productive.

#### HARRISON.

Our greeting, this fair City of Boone,  
Our hope and our country's pride,  
Whose fame, extending far and wide,  
Outrivals the sun at meridian noon;  
Enshrined 'mong thy protecting hills  
That hold thee in their fond embrace,  
Thou art of peace the trysting place;  
Embowered in flow'rs, thy beauty thrills  
The poet-mind, the artist-hand,  
And bids them paint, with pen and brush,  
The splendors that thy homes command;  
Far from the world's turmoil and rush,  
And avarice of the men of state,  
We hail thee as the "Future Great."

Harrison is beautifully situated on Crooked Creek, near the center of the county. It was platted as a city about 1860, and now has a population of over 1,800. Many express their wonder at finding such a thriving town nestling among the hills of North Arkansas. Commercially, Harrison is more favorably situated than any of her sister cities, being the central point of a large territory rich in products of field, forest and mine. As yet, we have no railroads, but four surveys cross here, and it is but a matter of a few years when we shall have direct transportation to the markets of the East, North and South. With all the varied and unsurpassed resources of the adjacent territory, combined with its many natural advantages, Harrison is destined to be the metropolis of the region lying north of the Boston Mountain. Away from the rush and stir of Eastern cities, in a healthful locality, with the best of society, with good schools, superior religious influences—what better home could one desire? We have a large, two-story brick schoolhouse, in which school is taught ten months each year. The religious interests of the town are watched over by the Presbyterian, Cum-

berland Presbyterian, M. E. and M. E. South, Christian, and Baptist churches. All have houses of worship, and the brick edifice which the Christian Church is now building will cost \$7,000, and will surpass anything of a like nature in this portion of the State. All in all Harrison is the place to live.

### **BAXTER COUNTY.**

BAXTER was the sixty-eighth county formed, which was March 24, 1873, out of territory taken from the Counties of Marion, Fulton, Izard and Searcy. Baxter is a northern border county, and its area is about 600 square miles. In surface the county varies, part being hilly and part level and undulating valley lands. The soil is generally fertile and very productive. In addition to that, portions of the county are rich in minerals, marble and onyx. There is no railroad in the county, the nearest railroad point being fifty miles distant. There are over forty schools kept open from three to eight months in the year. There are about thirty churches in the county, embracing the different denominations. The towns of the county are Mountain Home, the county site, Gassville, Big Flat, Lone Rock and Colfax.

### **BENTON COUNTY.**

BENTON, the thirty-seventh county created, was formed by Act of September 30, 1836, out of territory taken from Washington County, and was named after Thomas Benton, Missouri's greatest statesman. The county seat is located at Bentonville. Benton County is in the extreme northwest corner of the State, having the Missouri line for its northern boundary line, and the Indian Territory for its western border. Its area is about 900 square miles and its population about 35,000, with perhaps a colored population of 500. Its surface presents wooded, mountainous, rolling country and open prairie, interspersed with creek bottom lands. The growing of grain, corn, wheat, rye, oats and grasses, with fruits and tobacco, are the chief productions. Very little cotton is raised; the county is well watered with small streams, but none navigable. Some mineral indications are to be found in the county. But the chief and most profitable industry of Benton now is the fruit culture. Bentonville, the county seat, is a city of about 3,000 inhabitants. It lies near the center of the county, and is reached by a branch from Rogers of the St. Louis & San Francisco Railroad. The town dates its existence from the year 1837.

United States Senator James H. Berry and ex-Congressman S. W. Peel are prominent citizens of Bentonville.

### **CARROLL COUNTY.**

CARROLL was the twenty-sixth county formed, created November 1, 1833, out of territory taken from Izard County. It was named in honor of Charles Carroll, the last surviving signer of the Declaration of Independence, whose death was then fresh in the minds of the people. Carroll's area is about 640 square miles. In surface it presents a variety of kinds of country, being mountainous, hilly, alluvial and prairie. Corn and other grain are grown principally. Fruits do well. A railroad runs twenty miles into the country, from Seligman, Mo., to Eureka Springs. Marble and lead both exist to more or less extent. The famous Eureka Springs in the county, which began to attract attention for their curative properties about 1879, have attained great fame for their medicinal virtues, and have performed many wonderful cures and attract great numbers of visitors annually. The population of Eureka Springs is 5,000. It is a city of the first-class and has a full set of officers. The peace and order of the city is good. The people are largely church going, there being seven church houses in the city.



The citizens, knowing the purity and curative properties of the waters, and the advantages to be gained by the healthy location, have resolved to make their city an educational center, and the work is already begun. The Interstate Summer Normal and Educational Assembly have erected a building with a seating capacity of 5,000, in which a Normal School is held each summer, and attended by teachers from various parts of the United States.

Berryville, the county seat, is an interior town, near the center of the county, twelve miles from Eureka Springs. Its population is about 800 or 1,000. The famous school known as Clarke's Academy is located there.

## MADISON COUNTY.

MADISON, the thirty-sixth county created, was formed September 30, 1836, out of Washington County territory. Huntsville is the county seat. Madison County is separated from Missouri by Carroll County, and the Indian Territory by Washington. Its area is about 838 square miles, of generally broken lands, about one-half its area being mountainous or hilly. A considerable portion of the soil is alluvial on which the usual products are grown. There is an abundance of timber of excellent quality. The county is well watered and there are indications of stone, coal, lead, iron and silver, but none are developed.

Huntsville is the county seat. It was laid off in 1839. Its present population is 500 souls.

## MARION COUNTY.

MARION was the thirty-fifth county formed, which event took place November 3, 1835, out of territory taken from Izard County. It was named in honor of General Francis Marion. Yellville is the county seat, with a population of some 700 souls. Marion is of the northern tier of counties lying against the Missouri line, is well watered and its mountains well filled with minerals, covered with fine forests of timber, while fertile valleys line its waterways. The following from a description which appeared in the *Mountain Echo*, will give a pretty clear idea of the advantages Marion offers:

Zinc was first discovered in this county some five years ago; active prospecting at once began, since which time hundreds of thousands of dollars have been expended in mining, with a result of placing this county in the front rank of zinc districts in the world, and stamping it as the source to which the world must look for its future supply of that mineral.

Pine, white, post, burr oak, hickory, cedar and walnut predominate. The mineral belt is covered with timber as are the agricultural lands. The forest products, with railroad transportation, will instantly be in the market, and will more than pay for the land at the present average price of undeveloped mineral land, \$10 per acre.

Last but not least is the immense deposits of marble in this county, comprising all the principal colors of the merchantable article, fine of texture, susceptible of high polish, and rising in bold ledge form of from five to seventy feet. It has been pronounced by leading geologists to be the finest and most inexhaustible deposits in the United States.

In addition to White River, which is navigable six months in the year, railroad building is now going on and it is stated that twelve months hence will give us railroad connection with the markets of the world. At present shipments are being made via White River to Batesville, Ark., on the Iron Mountain & Southern Railway, thence to the various smelters of the country by rail.

Lands can now be purchased for one-fourth the amount they can be had for when the completion of the road is made, and the boom incident to an initial road opening up a wonderful country, is upon us.

Our exhibit at the World's Fair contains one boulder solid crystalized carbonate zinc 7x6x4 feet, and estimated to contain 14,000 pounds of ore. This was broken from a large boulder, weighing 236,000 pounds, which in turn was cracked off the main ore body of the famous Morning Star Mine of Rush Creek, Marion County, said main body being 43x33x63 feet solid ore.

## **NEWTON COUNTY.**

NEWTON was forty-seventh in order of creation, December, 1842, out of Carroll County territory. It is of the second tier of northern counties, and has an area of 900 square miles. The surface of the county is very broken, mainly, but quite a portion of the northern part is level and prairie lands. Jasper, the county seat, is in the interior of the county, a little north of center. Its population is perhaps 400. Newton County is developing into a great mineral county, second only perhaps to Marion, in extent and quality of her ores. The timber growth is varied and extensive, but as yet difficult of shipment.

## **SEARCY COUNTY.**

SEARCY was the forty-first in the line of formation. It was formed in 1838, out of territory taken from Marion County. Searcy has an area of 600 square miles. Its surface is somewhat broken, but about one-half the lands are level, and the soil good. The county is well watered, and minerals are known to exist in the county. Copper and lead have been discovered, and fine marble and stone are abundant. The famous Tomahawk Copper Mines are situated in Searcy County. Marshall, the county seat, was located in 1856. The present population is about 500.

## **WASHINGTON COUNTY.**

WASHINGTON, the eighteenth county formed, was created October 17, 1828. Washington is an extreme northwestern county, bounded west by the Cherokee line of the Indian Territory, and separated from the Missouri line on the north by Benton County. Its general character of country is hilly and mountainous, with about one-third of its territory level and of rich alluvial soil. Its area is about 890 square miles. The products of the county are all the grains and grasses, and all the general products of the latitude. The country is specially adapted to fruit culture, in fact to date it stands first and best in the matter of fruit growing. It is the home of the famous Shannon Pippin apple. Grape and small fruit growing is prosecuted with great success and profit. Fayetteville, the county seat, was founded in the year 1828. It is one of the oldest and best towns in the State. A great many of Arkansas' most distinguished sons have lived and died there. The Arkansas Industrial University is located there. It was established by the State. The building is a handsome and imposing brick and stone structure, having all modern improvements and adornments necessary to make it creditable to the city and the State in which it is located. The institution is in a prosperous and flourishing condition. The State supports it and keeps a good faculty in charge of it.

## **GOVERNMENT LANDS.**

The only way to get Government lands now is by homestead entry or pre-emption.

Any person may homestead 160 acres of public land who is the head of a family, or, if single, over twenty-one years of age, and a citizen of the United States, or has declared intention to become a citizen.

No settlement or improvement is required before filing, but it is best to make settlement and to be sure of a correct description of the land taken. The applicant need not appear in person before the Register of the land district in which the tract is situated, but if prevented from going to the land office by sickness, distance or other good cause, he may forward by mail his application and affidavit. After filing, the applicant has six months to get on his



land and begin his settlement and improvements. He must not be absent from his land except from necessary causes a few days at a time, and he is to make his actual residence continuously upon the land.

He must build a house that is habitable for all seasons, and must have several acres broken and in cultivation. After five years' residence, and at any time within seven years from the first filing, the homesteader may make final proof and secure his patent.

If he does not wish to reside five years on the land, he may, after fourteen months' residence and ordinary improvement, pay for the land at the rate of \$1.25 per acre and receive his patent.

Before making final proof, notice must be given by publication, in a newspaper to be designated by the Register of the land office, as published nearest the land in question. These may be contested.

Where a person has abandoned a homestead, that is, has failed to reside on and do the necessary improvements in the time required by law, any other person who wishes to file on the same tract may make affidavit attested by one or more witnesses, stating the abandonment and asking leave to prove the fact and be allowed to file on it, at the same time offering his own filing.

The following are the fees and commissions allowed by law for services rendered by district land officers:

#### DECLARATORY STATEMENTS.

Soldiers' and Sailors' homestead declaratory statements..... \$2 00

#### HOMESTEAD ENTRIES ON MINIMUM LAND.

[Original entry fees and commission payable when application is made.]

For 160 acres—fees, \$10; commissions, \$4; total.....	\$14 00
For 80 acres—fees, 5; commissions, 2; total.....	7 00
For 40 acres—fees, 5; commissions, 1; total.....	6 00

#### FINAL HOMESTEAD COMMISSIONS—(No fees.)

[Payable when certificate issues.]

For 160 acres, at \$1.25 per acre.....	\$4 00
For 80 acres, at 1.25 per acre.....	2 00
For 40 acres, at 1.25 per acre.....	1 00

#### PLATS OR DIAGRAMS.

Land officers are required by law to furnish plats. The land office circular says under the section of the Act of March 3, 1883, authorizing a charge to be made for plats or diagrams, the fees for the same are hereby fixed as follows:

For a diagram showing entries only.....	\$1 00
For a township plat, showing entries, names of claimants, and character of entry.....	2 00
For a township plat, showing entries, names of claimants, character of entry and number.....	3 00
For a township plat, showing entries, names of claimants, character of entry, number and date of filing or entry, together with topography, etc.....	4 00

For diagrams of a part of a township a proportional amount is charged.

The United States Land Office for the District embracing Baxter, Benton, Boone, Carroll, Fulton, Izard, Madison, Marion, Newton, Searcy, Stone and Washington Counties, and parts of Crawford and Independence Counties, is located at Harrison, in Boone County.

## CLIMATE.

The climate of Northwest Arkansas is all that can be desired, mild winters, long spring and summer and fall. In comparison with the much talked of climate of California, it is found that the mean annual temperature of Los Angeles is but one degree less than Little Rock, which is located about the center of Arkansas. In the northwest portion of the State the atmosphere is invigorated by the odor of pine and cedar, which renders it unequalled

anywhere for health. It is indeed a genial clime, as has been said the winters are short and mild, and the snow fall is generally light and usually only remaining on the ground but a few days. The heat of summer is not oppressive, while refreshing breezes generally prevail. The country is well known for its general healthfulness. By reference to census statistics, it will be seen that Arkansas is one of the healthiest States in the Union, and the northwest part in this respect is a highly favored portion of the State.

The climate of Northern Arkansas is more equable than in latitudes farther north or south and of localities possessing a less varied topography. Observations made at Lead Hill, Boone County, reported by the U. S. Signal Service for 1890 give the mean temperature as 60° 6 Fahr. In the coldest weather the earth in exposed situations does not freeze for a depth of more than four inches and seldom remains frozen more than two weeks. The heat of summer on account of the altitude and mountain breezes is seldom oppressive in the daytime, while the nights are delightfully cool and refreshing. The forest-clad mountains protect the valleys from the severe winds of winter. During the winter light snows are not infrequent, but never remain on the ground but a few days. The field can be plowed during much the greater part of the winter season. This portion of the State is peculiarly exempt from cyclones, violent storms and high winds, and it is a very rare occurrence to see a common rail fence that is staked and ridered. The reported rain fall at Lead Hill for 1890 is given at 58.90 inches.

## FARM PRODUCTS.

Our principal crops are corn, wheat, oats, rye, potatoes, peas, and the various grasses and vegetables. Anything like a system of manuring is unknown in Northwest Arkansas, and is not needed. While soil responds readily to a fertilizer, its natural richness obviates the necessity of such applications. In the older settled portions of the country there are farms that have been in cultivation for twenty, thirty, forty, and perhaps for fifty years, without scarcely the failure of a crop, and aside from an occasional load of manure from the barn lot, their original strength has not been supplemented. The yield per acre depends to a very great extent upon the industry of the farmer. Ordinarily, the corn crops will average from forty to seventy-five bushels to the acre. Oats about the same. Corn usually sells at from twenty to fifty cents per bushel—sometimes reaching in price as high as seventy-five cents. Oats bring from twenty cents to fifty cents per bushel. For wheat, Northwest Arkansas excels all other portions of the State. Vegetables of every description flourish as well here as in any portion of the United States; while our meadows and prairies are equal to the best for hay.

## WATER.

As before stated, the entire country is well watered, with the beautiful White River winding through it from west to east, together with innumerable smaller rivers, creeks, springs and branches, flowing from the hills and mountains. These streams abound with fish of various kinds. In mineral springs of medicinal qualities, Northwest Arkansas is perhaps without a rival. The virtues of the famous Eureka Springs, as a health resort, are well known in all parts of this country and Europe.

## TIMBER.

The State of Arkansas has a greater variety of useful timbers for the mechanical arts than any of her neighbors, or all the New England States combined, and with her navigable



rivers and railways they are easily placed on the market.—*Arkansas Press*. And Northwest Arkansas is not an exception to the rule, but has her share of all the varieties contained in the State.

## STATE OF IMPROVEMENT.

It seems to be generally believed by many not familiar with the state of improvement and character of the soil in Northwest Arkansas, where railroads are scarce, that we have nothing but small farms or patches among the hills, and they in a bad state of cultivation, and that the soil is all sterile and rocky, so as to make the pursuit of agriculture unproductive, unprofitable and therefore uninteresting. In order that these impressions may be removed we would briefly refer all to the present real state of improvement in the agricultural sections thereof. From an extended personal knowledge and acquaintance of the country, the writer would positively affirm that three-fourths of her area is susceptible of cultivation, and when properly handled will prove highly remunerative to the farmer. But by no means must it be believed that a good part of our fertile territory is not already in a productive state. There are innumerable farms of several hundred acres, in the very highest state of cultivation, distributed through the many beautiful prairies and rich valleys.

## DAIRY INTERESTS.

The dairy interest has been almost entirely neglected, though the country affords the most favorable conditions for its successful prosecution. A mild climate, pure air, excellent spring water, and a soil especially adapted to clover and domestic grasses, are conditions seldom found in one locality. Butter and cheese will bear transportation better than any other product of the farm and there is no good reason why Northwest Arkansas should not surpass all other localities in the production of dairy products.

## FISH CULTURE.

Fish culture that is being successfully prosecuted in many localities can be made very profitable in this locality. Artificial lakes can easily be constructed by simply damming the spring branches that flow in many ravines and would have a constant supply of fresh water from the mountain springs. The experiment of raising speckled, or mountain trout, has been successfully made at Mammoth Spring under the superintendence of the Fish Commission. Devoted to this purpose an acre of water will yield a much larger income than the same area cultivated in cotton or grain and at much less expense.

## STOCK RAISING.

Under this head the Commissioner of Agriculture, writing of Arkansas, says:

“The northern and western portions of Arkansas are especially adapted to the rearing of light harness and saddle horses. There is an abundance of pure water, a dry soil, containing more or less lime; with fertile valleys, producing an abundant supply of bone and muscle-making feed.”

“The mildness of the winters are such as to allow the young stock to run out nearly every day, and with winter pasture of rye and barley, the cost of raising good horses can be reduced much below that of States less favorably situated.”

The above statement applies with equal propriety to the raising of mules, which can be more profitably conducted than in localities more remote from the market afforded by the Southern cotton, rice and sugar plantations; and where more capital is invested in lands; and a greater expense incurred in wintering stock.

Cattle live during the winter on the open range but do not thrive without some feed; though in the summer and fall they fatten on the wild grass. Land that is inclosed and kept from fire, is soon covered with a luxuriant growth of native grasses, that afford rich winter pasturage sufficient to keep stock in good condition without feed.

Hill lands that can be made as valuable for grazing purposes as the blue grass lands of Kentucky, with less labor and expense than was required to bring them to their present condition. In addition to the enumerated advantages possessed by this country for stock raising, stock is remarkably healthy, and not subjected to the annoyance of insect pests so objectionable in less favorable localities.

Sheep keep fat and produce heavy fleece from the herbage on the open range, and receive no further attention than salting and shearing; the destructive wild animals having been nearly extinguished.

Hogs fatten readily for slaughter on the wild mast, and do not require further attention than an occasional rounding up and feeding to keep them from running wild.

### TOBACCO.

Tobacco nowhere pays a better revenue to the producer than in Northwest Arkansas; and large barns are to be seen in all directions, in portions of the country.

### POULTRY.

Of late years the poultry business in the various counties of Northwest Arkansas, has developed into mammoth dimensions. Most any of the towns ship thousands of dollars worth of eggs and chickens monthly. The whole country exports hundreds of car loads of eggs and poultry annually, all of which attest how well the country is adapted to poultry raising.

### SPORTING.

Deer, turkeys and squirrels in the mountains, ducks and quails about the water courses and on the prairies, and fish in the numerous streams, all afford sportsmen and overworked business men a fine field for recreation.

### SOCIETY.

Our society is of the very best, and in this particular especially have we been most misunderstood. Northern people especially are agreeably surprised on visiting our State to find our people as orderly, polite, hospitable and peaceable as they are. In Arkansas every man enjoys perfect independence, we have no invidious distinction between rich and poor, and all enjoy in the fullest degree the liberty of speech and opinion. There are many advantages which we have not space to mention, but it is certain, that, all things considered, Northwest Arkansas offers a most excellent and enticing field for immigrants, either rich or poor. Schools and churches are found at short intervals throughout the rural districts, while there is scarcely a town or city but has its institutions of learning and higher education. No State in the Union has a better enforced law against the carrying of weapons, and it can safely be said that no where can a lesser percentage of the people who carry arms be found than in Arkansas. The State is keeping pace in protecting and aiding her citizens by beneficent laws, securing payment for labor performed or material furnished, and protecting the unfortunate debtor against the rapacity of the greedy creditor.



## MAKING HOMES.

Building material of the finest quality is found in abundant quantities, and the cheapness of the same allows the erection of improvements at from one-half to one-third of the cost in other countries. All varieties of ornamental shrubbery and grasses grow here with very little care, and homes are beautified and made attractive with very little expense. Northwest Arkansas is a land of pleasant homes. Improved lands sell from \$5 to \$100 per acre, according to location and nature and extent of improvements. Provisions and general supplies are as cheap here as anywhere. Farm wages range from \$10 to \$30 per month. Common day labor, 50 cents to \$1. Mechanics, \$1.50 to \$2.50 per day. Brick masons, \$2.50 to \$4 per day.

## WATER POWER AT MARBLE CITY.

Here is the nucleus of a prosperous manufacturing town, its superb water power, and many other natural advantages insuring its rapid growth and permanent prosperity.

Marble City affords a fine opening for the establishment of cotton and woolen mills, and parties investing in these enterprises cannot fail to realize a handsome profit. The abundant water power would effect a saving of the original cost, and wear of a steam engine, of fuel, and the wages of an engineer that would greatly reduce the cost of manufacturing.

The local demand would consume the product of the mills to a great extent, and yarns and cloth could be profitably exchanged at the mills for the raw material. One of the cotton gins in Marble City in 1889 put up 800 bales. The cotton of this country is eagerly sought for by spinners on account of the length and strength of its fiber. The production of cotton is steadily increasing and sufficient supply for a large mill could be bought at its doors, thus giving the manufacturer the great advantage of present supply of raw material and a home market for the manufactured products, leaving the costs of freights, commissions and other incidental expenses paid by the consumer to be added to his profits.

Wool sufficient to employ a mill is raised in the vicinity, and the large local demand for woolen goods would consume the greater part if not the entire output.

## OUR MINERALS.

### ZINC.

Those most competent to judge pronounce the deposits of zinc in Northwest Arkansas, to be the richest and most abundant ever discovered in the United States. The best evidence of the superior quality of our ore is the fact that smelters readily pay more for Northwest Arkansas ores than for that produced in other portions of the country. Nature has indeed endowed our country, especially that part embraced in the Counties of Boone, Newton, Searcy, Marion and Baxter, with a liberal hand. Running through the Zinc Belt everywhere, tons and tons of peculiar percolated rock, intermingled with carbonate of zinc and "black jack" can be found at or near the surface.

Again, a remarkable and significant fact is that the ore vein is invariably found at from sixty to eighty feet from the surface, and the deposit the purest grade of zinc. We speak more particularly of zinc because it is the predominating mineral in this country, so much so that it is called the zinc region. But we might mention that we have also good and valuable deposits of lead, copper and manganese.

A few years ago the United States surveyors at work in Marion County, found such un-

mistakable indications of mineral deposits in the outcroppings of zinc, lead and copper, that by their advice a considerable body of land was taken off the Agricultural list and placed in the Mineral Belt, to be governed by the mineral land laws. In his report to the United States Mineralogical Bureau, Prof. Gardner, State Geologist, pointed out particularly the richness, of our zinc, comparing the same in quality with the Silician ore, the finest in the world. Until the last four or five years little was done to develop what will undoubtedly prove in a very few years to be one of the richest and greatest mineral countries in the United States. Assays of our zinc ore, by Prof. Pierre de P. Rickets, Metallurgist and Chemist of the Columbia School of Mines, New York City, made at the instance of the New York Zinc and Lead Company, prove the ore to run 58.09 per cent pure zinc, 60 per cent being the purest state in which it has ever been found.

It may seem strange to some of our readers, but it is nevertheless a fact, that zinc, as a valuable commercial metal, has been known, comparatively, only a few years. Men now living can remember when the English used the ore on account of its weight and compactness, to ballast their ships; that is to say it was commercially valueless. In recent years, however, science has demonstrated that, next to iron, it is perhaps the most useful metal yet discovered. Its uses are more general than those of copper and lead. The importance of oxide of zinc and other chemicals of which zinc forms a part is well known in the chemist's and druggist's laboratory, and spelter or metallic zinc is an indispensable article of commerce and is used in a thousand varieties of forms, so that gradually, year by year, zinc mines, or lands showing indications of zinc ore, have been more and more sought after, especially as the old mines have become exhausted or had to be abandoned on account of water, expensive machinery or depth. Thus we see our new mines will be in very great demand when transportation is assured.

The writer has traveled considerably over Boone, Marion, Baxter, Stone, Searcy and Newton Counties. In all of which there is much to interest, concerning minerals. In each now, the important question of mining zinc, lead, copper, marble, onyx, manganese or some other mineral, or one or all of them, is an absorbing topic. It has resolved itself fully to the mining of these minerals, for there no longer exists a doubt in the mind of any man who has traveled here, but what all of those I have mentioned, and others, exist.

We could show you for instance a quarry of beautiful, fine grained, variegated marble, with an exposure of from twenty-five to fifty feet thick, and a quarter of a mile long, all ready for the workman. Again you might see with your own uneducated eye, an exposure of over five hundred tons of zinc that will not cost more than fifty cents per ton to mine, and that has not cost the owners over \$5,000 to thus far develop and expose. We might here ask our readers to think, not of our possibilities, but of the existing and interesting facts that everywhere present themselves. For instance we have the property of White River Mining Company, the Bonanza mines, the Buffalo Zinc and Copper Mining Company, the Morning Star Mining Company; the mines and onyx caves and beds of Water Creek; the Tomahawk Copper Mines, several prospects on James and George's Creeks; the New York Zinc and Lead Company; the Shawnee Zinc and Lead Company; the Music Creek Zinc Mining Company, besides various other marble and onyx quarries and prospects and outcroppings without number in Marion County, and all the mines and developments in Boone and Newton Counties. We say all of these are convincing evidences and arguments as to the real existence of richness and vastness of our minerals.



## FRUITS.

Northern Arkansas is acknowledged to be pre-eminent in the production of fruit. Apples, peaches, pears, grapes, and all the small fruits grow as prolific here as anywhere. The following facts are sufficient evidence of the quality of our fruits:

At the World's Exposition held at New Orleans in 1885, Boone County was awarded first premium for best display of apples, peaches and pears, and carried off thirteen first premiums on individual specimens.

At Boston, during the Pomological Exhibition in 1887, the first premium for excellence was again given to Arkansas and the award was made on the display sent from Northwest Arkansas.

Again, at San Francisco in 1888, Arkansas carried off first honors and this, too, over California, the acknowledged fruit country of the world.

In addition to this, wild fruits grow in abundance, and no one need be without fruit every day in the year. But little attention has been given to fruit culture on account of a lack of transportation, but now thriving young orchards may be seen on every farm.

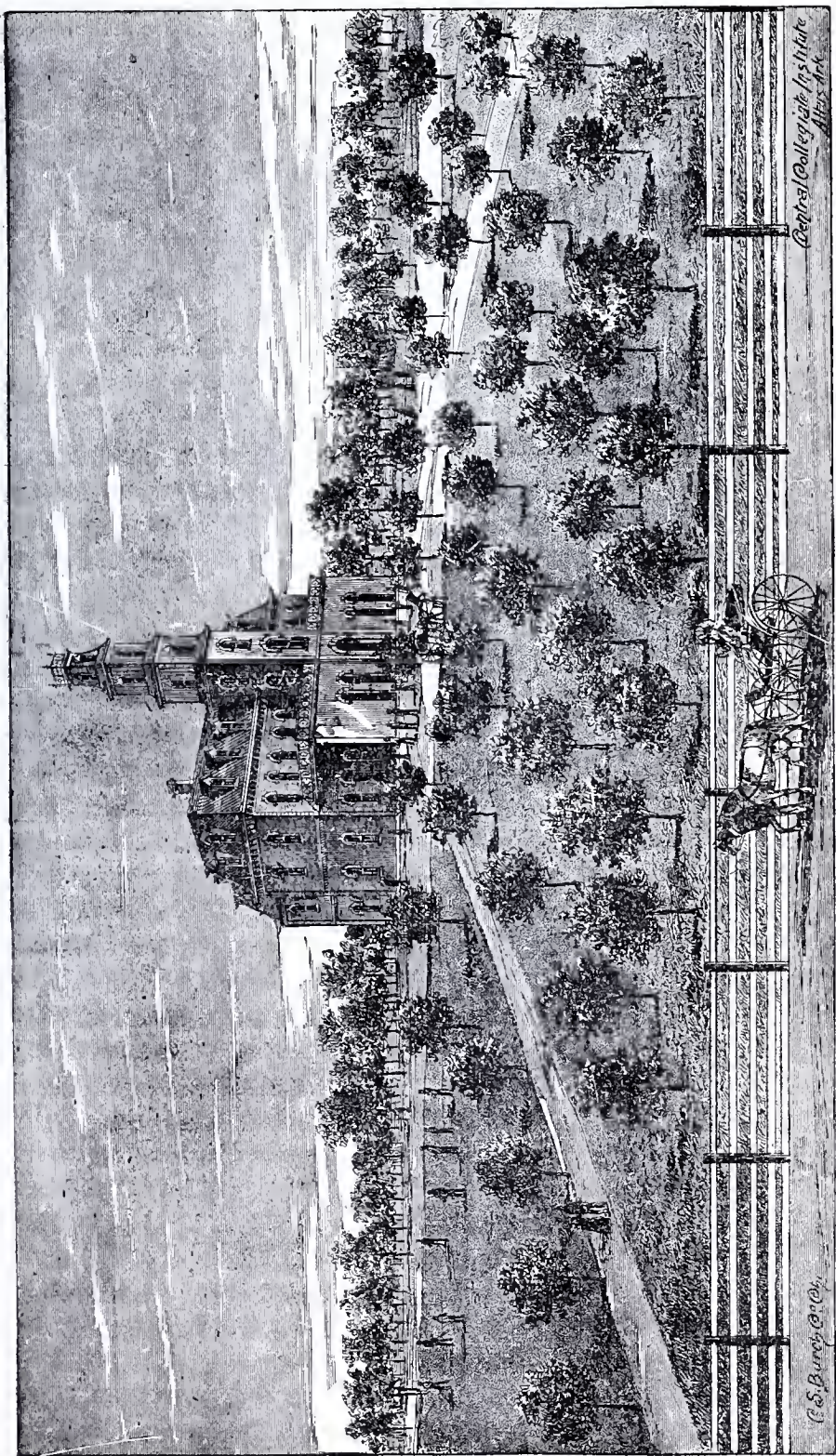
In the language of another, whose identity we have lost, Northwest Arkansas is Nature's famous fruit palace of America. Indeed, the fruit interest of this section, though in its infancy, is attracting great attention and favorable comment from all sources of the country, and a tide of immigration has already set in. It is the home of the strawberry and raspberry, these fruits selling never for less than \$75 per acre, often reaching \$150 to \$200 per acre. Our market is coextensive with the whole length and breadth of our country. The apple, however, is the fruit of all fruits; it is king in Northwest Arkansas, attaining a perfection here that cannot be rivaled anywhere. This has been well demonstrated in Washington County. At the Springdale fruit fair a few years ago, there were about three hundred varieties of apples alone on exhibition. The premiums which we have taken at the various exhibitions are sufficient evidence to convince anyone of the superior excellence of the fruit of Northwest Arkansas, where all of our climatic conditions conspire to make it all that Nature ever intended it to be. In Northwest Arkansas we grow twenty-ounce Pippin, the beautiful Maiden Blush, the Wine Sap and Early Harvest, the Red Astrachan, the Buckingham and Early Pippin, the Red and Yellow June, the Sweet Bough and Summer Pearmain, Grimes' Golden and the Yellow Bellflower. This is the home of the celebrated Ben Davis. We also grow to perfection the Huntsman's Favorite, Missouri Pippin, Rome Beauty, and hundreds of other varieties, that will some day surely make this the richest section in all our vast country, and that before many years roll by too; and it should be borne in mind that our climate and seasons are so near perfect that a failure in any crop is unknown. We ask the earnest consideration of our advantages. Our unimproved fruit lands can be bought now at reasonable figures, a mere trifle, when the profits they yield are considered. Fruit trees can be had for \$30 and \$40 per thousand.

We are indebted to Mr. G. A. Gamble, of Harrison, proprietor of the Harrison (Estes) Nursery, also editor and proprietor of the *Arkansas Fruit Grower*, for the following article concerning this as a fruit country and the various fruits, their adaptability to this climate and country, etc.:

### NORTH ARKANSAS, "THE ORCHARD OF AMERICA."

"Comparatively little is known throughout the United States concerning the unlimited resources of Northwest Arkansas. Much has been said about our undeveloped mines and the impossibility of estimating the hidden treasures which await development, but the fruit industry is perhaps as much in its infancy as are our mineral resources.





HIRAM AND LYDIA COLLEGE, ALTUS.



We have very few orchards which are made to yield their full quota, yet it is possible to produce from fifty to sixty bushels of apples per tree. Allowing fifty trees to the acre we have 2,500 to 3,000 bushels from one acre, which marketed at gathering time, at the very lowest figures, would net the producer \$600 to \$800 per acre, and if kept until spring, assuming that they are late keepers, and allowing one-sixth for loss, the remainder would bring the husbandman \$2,000, or more than three times the amount realized if sold in the fall. But there are few orchards under present conditions that average more than twenty bushels per tree, while many farmers realize a very small profit from their orchards. Benton and Washington Counties have a larger acreage of fruit than Carroll, Madison, Boone, Marion or Baxter or the counties south. It is estimated that the apples shipped in 1892 from Bentonville alone amounted to \$30,000 while the shipments from Fayetteville, Washington County, were in excess of that. Early peaches and strawberries are shipped successfully from points accessible to railroad transportation. Pears, plums, cherries, grapes and other small fruits receive comparatively no attention in portions of Northwest Arkansas. One hundred apple trees, two hundred peach trees, ten cherry trees, ten pear and twenty plum trees to each farm, would perhaps be a fair average for Boone County. Most farms are supplied with gooseberries and strawberries, while perhaps one in five have a few grapevines. The Ben Davis is the most popular all purpose apple for this section. Peaches do exceedingly well, but most all fruits are subject to attack from insects and fungus diseases. But little effort has been made in Boone and adjoining counties to arrest these enemies to fruit, by spraying. But rather when the fruit becomes thus affected, the orchards are in many instances abandoned. A few orchards have been sprayed with success, but sufficient confidence as to the efficacy of spraying has been established to bring the spray pump into general use.

It is an established fact that all fruits grown here attain their largest proportions. The twenty-ounce Pippin has been grown to weigh twenty-two ounces. The Ben Davis, Arkansas Black, the Arkansas Mammoth Blacktwig, Minkler, Rome Beauty, White Winter Pearmain, Wine Sap, Shockley, Missouri Pippin, Jeneton and Little Red Romanite are the leading varieties of winter apples for this country; while the Rambo, Fall Pippin and Jonathan are the excellent fall apples, and the Early Harvest, Red June and Red Astrachan are the most popular early varieties. The fact that our fruits have taken the prizes at New Orleans, Boston, New York, Louisville, Kansas City, St. Louis, and Riverside, Cal., needs nothing more to convince the reader that this is the home of the apple, the peach and the strawberry vine.

What more inviting field can be offered the home seeker than a place where can be had thousands of fruit trees continually growing into objects of beauty and wealth, and where the crop is seldom cut short if properly cared for, and never a failure?

Unlike most business occupations it furnishes an inviting field within easy reach of the man with limited means, and by starting on a small scale, putting out a supply of small fruits which will bear the second year, he will at once begin to be awarded for his labor."

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## LAWRENCE COUNTY.

BY HON. CLAY SLOAN.

Lawrence lies in the central northern portion of the State. This was one of the original five counties into which Arkansas Territory was divided at its formation in 1815, and derived its name from the gallant American sea-captain who, when wounded in an unequal engagement gave utterance to the expression, "Never give up the ship."

Lawrence County has an area of 600 square miles and is divided into equal eastern and western portions by Black River. West of the river the surface is hilly and the soil a clay and lime stone adapted to the growth of wheat, oats, rye, tobacco, cotton, corn, potatoes and small fruits. It is also pregnant with minerals, among which lead and zinc have been worked to some extent, notably at "Lead Mines," five miles from a railway, and zinc at "Happy Mines," twelve miles from a railway and five from navigation.

The eastern portion is undulating alluvial soil, very rich and adapted to cotton, corn, potatoes, melons and fruits.

#### WATER.

This county is especially blessed with fine waters. Black River is navigable the year round and has a length of seventy-five miles in the county. Tributary to this in the western portion are Strawberry and Spring Rivers, which in their turn have as tributaries Machine, Cooper, Dry Stinnett's, Hardin "Flat" and other creeks, which are fed by gurgling springs without number, and now these creek and river valleys have quite a number of farms upon them, on which oats, wheat, rye and corn are waiving, and on the pasture lands, consisting of timothy, orchard, millet, redtop and clover, are found a goodly number of cattle, sheep and hogs, which of recent years have been bred up to a limited extent. But still lands here are for sale at from \$1 to \$10 per acre according to improvements and location, and there is still quite an acreage of United States and State lands that may be had for establishing a home upon them.

East of Black River the water courses are "Village Running Water," "Marrow Bone" Creek, "Lindsay Horner" and other bays. Here the soil is exceedingly fertile, one bale of cotton, fifty bushels of corn per acre being an average crop. This soil is especially adapted to the growth of watermelons and sweet potatoes which are grown in great quantities and marketed in Kansas City, Mo., Memphis, Tenn., and other points. There are also quite a number of small peach orchards and berry farms sprung up in the last few years and are bringing their owners handsome returns.

#### TIMBER.

Timber is found in great quantities, consisting of oak, cypress, gum, elm, ash and walnut, all of which are being worked to some extent, there being now in the county not less than fifty sawmills in successful operation, and though their output is remarkable the inroad upon the supply is hardly discernible.

#### TRANSPORTATION.

Apart from Black River, traversing the county north and south, there is the St. Louis, Iron Mountain & Southern Railway which runs the entire length of the county, twenty-three miles north and south through its eastern portion, making a junction with the Kansas City, Springfield & Memphis Railway at Hoxie, Ark., which has a length in this county of thirty-three miles, thus for its abundance of products there are ample facilities for shipment to Memphis, Tenn., eighty miles; Kansas City, Mo., two hundred miles; St. Louis, Mo., two hundred and twenty-five miles; Little Rock, Ark., one hundred and twenty-five miles, and many intermediate points.

#### EDUCATION.

The educational facilities of this county are the efficient free school system of Arkansas. There are here fifty-four districts in which school is held from three to ten months in each year, thus furnishing scholastic training as good as the best for the educational advancement of its children, black and white, in separate schools. Within each of these districts there are from two to three churches of the Methodist, Baptist, Presbyterian and Christian denominations, where on each Lord's day the people meet in Sunday Schools and other service for the training of their children and their own spiritual and moral upbuilding, and that social refreshing always beneficial among the law-abiding, intelligent, honest, industrious citizenship such as Lawrence County boasts. Lawrence County has seventy miles of navigable river, one hundred square miles of farms, sixty-five miles of railway, millions of feet of lumber, thousands of tons of zinc and iron, fifty sawmills, spoke factories, etc., fifteen thousand inhabitants. Still like the old ship of Zion, "there is room for a many a more," and should they come, be they from north, south, east or west, or from over the sea, their hands will feel the warm clasp of welcome.



## EUREKA SPRINGS.

The history of the Eureka Springs is tinged with romance and tradition running back to the time when Arkansas was a part of the dominions of the King of Spain. In support of this, in 1880, in a cave near by, some tools of antique pattern were found, supposed to have belonged to early Spanish adventurers. The Hon. J. M. Richardson of Carthage, Mo., relates a conversation had with "White Hair," chief of the Osages, in 1847, about a wonderful "Medicine" Spring which he located in this vicinity, and described as flowing into a basin-shaped cavity in the rock, which "Black Dog's" father scoured out some seventy years before, from which they dipped the water with their gourds, and in which, by diverting the stream, they sometimes ground their corn. Col. Richardson said that when he visited these springs in 1880 and saw the basin which then existed, but is now covered by the grade in front of the spring, everything so completely coincided with "White Hair's" description as to leave no doubt in his mind of its identity.

The location of the city is the last one in the world which would ordinarily have been chosen. The impossibility of presenting a striking and vivid picture of Eureka Springs has been fully realized by every person who has made the attempt, and the most powerful descriptive writer would rise from the task dissatisfied with the best efforts of his pen. To group and present a few of its most prominent features would utterly fail to do justice to a city without a parallel—unique, phenomenal, picturesque and beautiful.

When the first view of the city is obtained it presents a most unique appearance. It might be compared to a vast army of buildings of various sizes in an attempt to scale the mountain heights, stopping temporarily before making another effort. They are not in tiers, yet they rise one above another, like huge steps in a giant's ladder. Every spot upon which a human abode could be constructed has been utilized.

It is indeed a most peculiar looking place, presenting an apparent disregard to anything like order and regularity of arrangement, covering an area of some two or three square miles. The city is one of wonderfully rapid growth, and where a few years ago was an uninhabited, sterile mountain glen, now nestles a bright little city of over 6,000 resident population, which is greatly increased by tourists and visitors constantly coming and going.

The formation of the mountains is remarkable, a sort of geological confusion. A person might almost imagine without very great effort that here may have been located the Creator's work-bench when He fashioned the universe. Indeed, this whole region looks as if some mighty eruption had once convulsed the place and left it in heaps and piles without regard to man's convenience. The face of the country, the bold, bare, projecting crags, the jutting rocks, deep depressions, fissures, sharp angles and numerous caves, all favor this idea. The gravel stones, many of them very beautifully marked, show evidence of having been subjected to heat.

After this region was abandoned by the Indians, the character of these springs was only known to the few white settlers who, principally as hunters, inhabited these mountains, until 1879, when Judge Saunders, who had been afflicted for years with erysipelas and dropsy, learned of the efficacy of the waters through a local physician, who advised him to give them a trial. He did so and was cured. The news of his restoration to health caused others to try the springs. They also in turn received the coveted blessing—restoration to health. These were discussed and commented upon, causing others to come in an increasing ratio, until now, when scarcely ten years have elapsed, at the place where Judge Saunders' lonely tent stood, has risen a city as if by magic of some Aladdin.

The many marvelous cures effected by the use of the waters of Eureka Springs are attributed to no one spring in particular, although each one has its formidable list of cures and enthusiastic advocates. The charming legends that have become attached to each one would in themselves suffice for a volume that would prove both quaint and entertaining. The many marvelous cures attributed to the use of these waters would almost lead a person to believe that the day of miracles had returned to bless mankind in the healing of disease.

There are upwards of forty springs within the limits of the city. All possess powerful medicinal qualities, such properties as are conducive to health and longevity, and no person can be positive that they will not prove beneficial until giving them as fair a trial as they would be willing to give their family physician. One should not become discouraged after reaching the springs because a miracle is not performed, and, after a few drinks of the water and a few days' baths, leave before the work of restoration has even commenced.

Should the question be asked: What will these waters cure? it might be answered, that it is harder to decide what they will not cure. Rheumatism, dyspepsia, kidney diseases, liver complaint, paralysis, diseases of the eye, hay fever, nasal catarrh, female complaints, skin diseases, scrofula, neuralgia and constipation have all been benefited and many cases completely cured. Observation has shown that consumption is almost the only disease which does not readily yield to the remedial effects of these waters.

The first discovered was the Basin Spring, so called because of the peculiar bowl-shaped cavity in the rock heretofore referred to, and is one of the most popular of the group.

Harding Spring, Crescent Spring, Dairy Spring, Little Eureka and the Magnetic are among the principal ones, of which the Crescent and Dairy have been improved with handsome pavilions, and have been protected from contamination.

The Crescent Spring flows out from beneath a ledge of rocks upon the same level with the others. The water from this spring has acquired a reputation for wonderful cures. It is located on the mountain side below the Crescent Hotel, in the best part of the city, and surrounded by many handsome cottages. The spring has another outlet near by, formerly called The Congress Spring, which is now arched over beneath the surface of the ground with masonry, and its entire flow forced, by means of powerful pumps, over two hundred feet to the summit of the mountain, where it supplies the baths and other domestic uses of the Crescent Hotel.

On the opposite side of the mountain, west of the Crescent Spring, is located the Dairy Spring in one of the loveliest parts of the city. This spring is one of the most famous of this popular group. To its waters is attributed the cure of a large number of cases of cancer. It is located but a short distance from and within the grounds reserved for park purposes attached to the Crescent Hotel.

Another spring, known as the Magnetic, which derives its name from the magnetic qualities of its waters, and is much frequented. Many wonderful cures have been effected here.

The Harding Spring is located a full half mile north of the Basin Spring. Leaping out from the face of a triangular nook, beneath the overhanging bluff ledges and jutting rocks, it merrily pours out a copious stream of cool, clear, refreshing water.

The United States Government analysis, however, shows that all differ but little in their constituent parts, although many of the residents claim the best results are to be had only from the special spring that may be located with regard to their personal interests. To all are attached the romance of superstitious legends: and crowds of tourists and hapless invalids dip steadily from the current, from early morn to the close of day.





FAULKNER COUNTY  
COURTHOUSE,  
Conway, Ark.

E. G. SEVIER,  
County Judge.

R. E. SEVIER,  
Commissioner.

RICKON & THOMPSON,  
Architects,  
Little Rock, Ark.

The accompanying engraving shows the Faulkner County Courthouse, looking northwest from the corner of Robinson and Locust Avenues. This building, which is now under course of erection, will be a model of beauty and convenience when completed. The basement, foundation and trimmings are of gray sandstone from the Cabin Creek quarry, and the first story of tower is of gray granite, supported on the corner by a massive polished column of same material. This stone is from Pulaski County, and is said to be the finest granite in the world. From water table to top of first story of tower, steel gray brick are used. These brick are made at our home factory, and cannot be excelled for beauty or durability. The interior woodwork is of native yellow pine, finished in hard oil. The building from out to out is 65 x 110 feet, with county offices, fire and burglar vaults on first floor and court, jury, attorney and witness rooms all on second floor, all of which are provided with all modern conveniences. The corner stone bears the following inscription:

ERECTED 1893.

Rickon & Thompson, Architects.

E. G. Sevier, County Judge.

R. E. Sevier, Commissioner.

Donaghey & Harrell, Contractors.

The building cost \$24,600.



# NORTH ARKANSAS.

## SHARP COUNTY.

The County of Sharp is in the northern tier of Arkansas counties, bounded on the north by Oregon County, Missouri, on the east by Randolph and Lawrence, and on the south by Independence, and on the west by Izard and Fulton Counties. The most of its surface lies high and dry, and is drained by waters flowing south, tributary to White River; those tributary to Black River flowing east. Its surface presents a variety of features, some portions being hilly and broken, others rolling and undulating, with summit plateaus, while still other portions present a level or flat surface.

North Arkansas occupies a middle ground between the extremes of heat and cold. The mean average temperature for Arkansas is 60° Fahrenheit, and the mean average rainfall 49 inches. Though containing no navigable stream, Sharp is a well watered county. About one mile west of Hardy, in section 3, township 19 north, range 5 west, it receives the waters of South Fork, itself a large and important stream. These crystal streams, the one rushing impetuously down rocky canyons from the great Mammoth Spring of Fulton County, and the other from the spurs of the Ozarks farther west, abounding in salmon, bass, trout, and other game fish, afford the most delightful pastime to the true sportsman; while the dashing falls and headlong cataracts, occurring every few rods throughout the course, offer water-power of untold capacity, where splendid mills and factories might be operated at small cost for motive power.

The timber of the county includes pine, all the oaks, walnut, hickory, ash, sycamore, elm, gum and cedar. In the western portion of the county a belt of yellow pine fifteen miles long and from two to five miles in width furnishes an ample supply of excellent lumber for building purposes.

The crops annually produced include corn, cotton, wheat, oats, rye, millet, redtop, sorghum, clover, tobacco, beans, peas, Irish and sweet potatoes, melons, squashes, pumpkins, onions and all vegetables grown in a temperate climate. The fruits grown are apples, peaches, cherries, plums, apricots, quinces, pears, damsons, grapes, raspberries, blackberries, strawberries and others. The strawberry and blackberry grow wild throughout the county. Fruits are not extensively grown, yet with ordinary care fruit culture is a success. Our apples, pears and peaches placed on exhibition at the Little Rock Exposition attracted widespread attention, though placed beside the finest collection of such fruits ever shown in the State.

The crops annually grown for consumption and shipment, by the latest reliable statistics, include 6,500 bales of cotton, 600,000 bushels of corn, 56,000 bushels of wheat, 70,000 bushels of oats, 4,120 bushels of peas and beans, 2,164,000 pounds of hay, 60,000 pounds of wool, and 10,000 pounds of dried fruits.

The corn yield is from 25 to 75 bushels per acre. A crop of 75 bushels per acre is rare, and so also is a crop as small as 25 bushels.

The average yield of wheat in the county is quite small, but is annually on the increase. The census of 1880, which is the latest reliable source of information on wheat production at hand, places it at a fraction less than ten bushels per acre, but at that time the people were less acquainted with wheat culture than now. Then the wheat was scattered broadcast



in their cornfields with the cornstalks or corn still standing, and scratched in with a small plow. There was not a wheat-drill, a reaper, or anything of the kind in the county. Since then some of our most enterprising farmers have supplied themselves with improved plows, drills, reapers and mowers, and are now making some money raising wheat. Where proper care has been bestowed some extraordinary yields of fine wheat have been reported. A crop was grown on upland in the vicinity of Evening Shade that had been under the plow for more than forty years without fertilizers of any kind, but by deep plowing and early seeding it was made to yield more than thirty bushels per acre. After thorough preparation of the soil and early seeding, the wheat crop is always a success here.

Cotton is grown in all parts of the county. The Strawberry valley, the valleys of the tributaries, and the adjacent highlands, by reason of the warm, sandy soils, furnish our best cotton lands. In this region the farmers who grow cotton as their surplus crop are prospering.

The apple is a sure crop in all the northern counties of Arkansas. In some of the northwestern counties, notably Washington and Benton, possessing the same character of soil in all essential respects, with the same climatic influences as Sharp, but where the cultivation of apples has been a leading industry for many years, their fruits have obtained almost a world-wide reputation. Apples equally as good are grown in Sharp County where the same attention is bestowed.

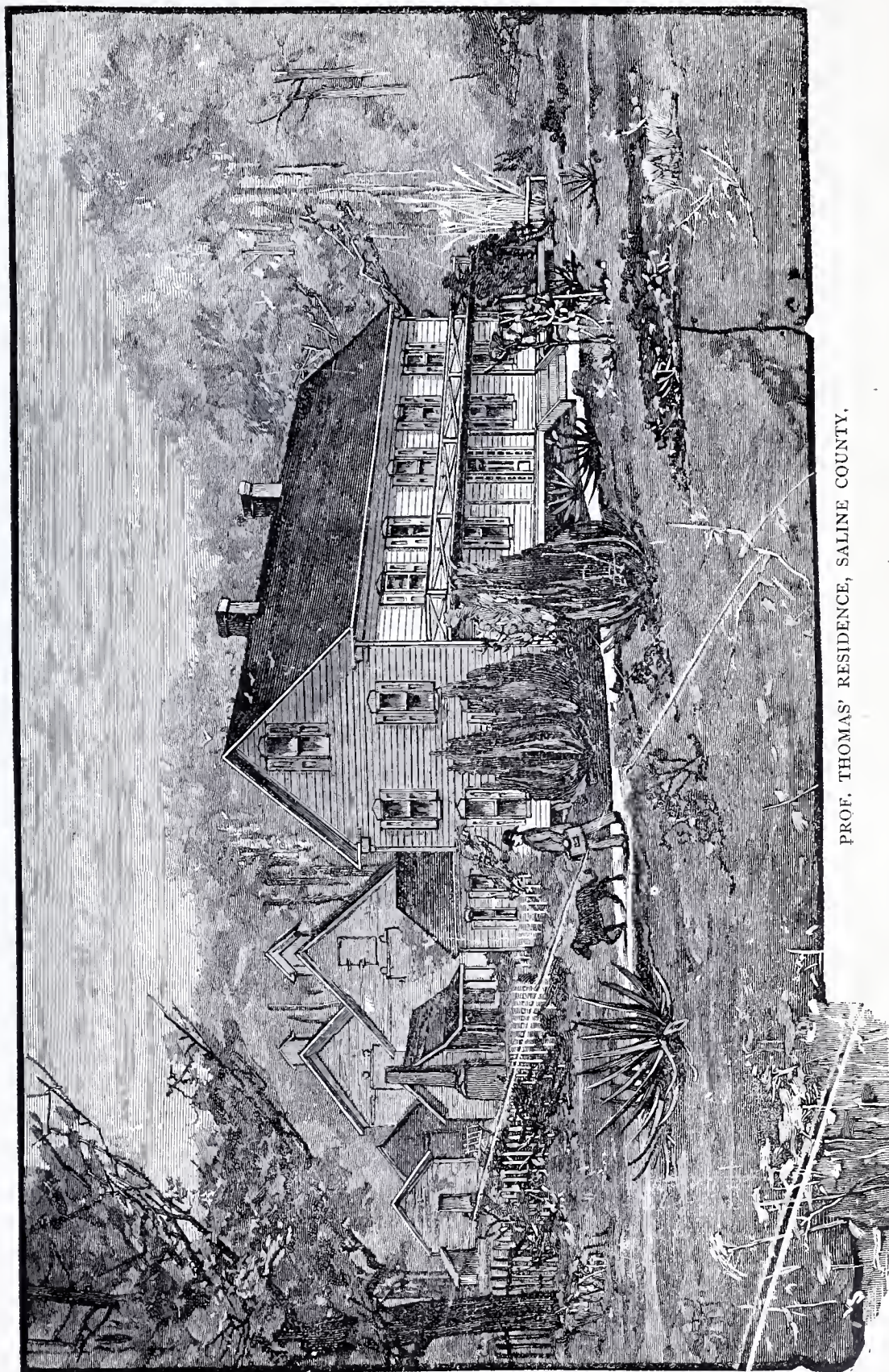
The peach is at home in this section of the State. The most perfect specimens are raised with slight attention on any of our soil. Seedlings, grafted or budded fruits, whether grown in Northern or Southern nurseries, come in bearing early and seldom fail to produce immense crops. Our cheapest lands and roughest hills may be profitably utilized for peach-growing. The northern and middle portions of the county, lying near the Kansas City, Springfield & Memphis Railroad, offer good opportunities to the grower of early fruits. The peach tree borer is the only enemy to peach culture in this section.

One hundred and sixty varieties of apples and nearly as many peaches with all the varieties of cherries, apricots, plums, quinces, damsons, pears, grapes and berries, can be successfully grown here, and the business can be inaugurated on smaller capital in this county than any other in the State. Lands well adapted to fruit growing may be homesteaded or bought at \$1.25 per acre.

The county is unsurpassed for stock raising. The farmers of Sharp County can raise horses, mules, sheep, cattle, etc., 100 per cent cheaper than it can be done farther north. From early spring to late autumn stock need only to be looked after and salted occasionally. Hogs do remarkably well here when given the proper attention. For sheep, no section on the American continent is better adapted to that industry than Sharp County and the other counties of Northern Arkansas lying west of it. There is not a single sheep farm in the county, nor a farmer engaged in sheep or wool growing as a business, yet, according to the State Auditor's report, founded on the tax lists, only three counties—Washington, Benton and Independence—in the whole State, have more sheep than Sharp. Two of these counties exceed Sharp in area 300 square miles, and the other over 100. Balancing the annual increase of flocks against the cost of winter feeding and attention, if the wool clip should not exceed three pounds per head, wool is produced in Sharp County at less than four cents per pound.

Sharp County lies in the mineral belt. Vast deposits of zinc, iron and manganese ore are known to exist and have been partially developed, and though the work was conducted under great disadvantages, it is said that it was profitable at that time. Zinc has been successfully mined and smelted at Calamine, in the southwestern portion of the county.





PROF. THOMAS' RESIDENCE, SALINE COUNTY.





## EASTERN ARKANSAS.

The following notice of Arkansas, Prairie, Monroe and St. Francis Counties was prepared by Maj. Gray Taylor, of Palestine :

### ARKANSAS COUNTY.

This county embraces an area of 1,000 square miles, lying mostly along the west bank of White River, in the southeastern part of the State. Bounded on the north by Arkansas River, it thus includes some of the finest bottom lands in the State.

The surface is drained by Bayou Meto and Big and Little La Grue Rivers, which flow through the county from northwest to southeast, thus giving an abundance of water supply.

The surface is rolling prairie and woodland. Though nowhere more than 100 feet above high water mark, there is no land in the county that is not susceptible of cultivation.

Grand Prairie enters the county on the north and extends down the center for forty miles, being from ten to fifteen miles wide. Besides this, there are several other smaller prairies, while the woodland lies along the streams and in places crosses the prairies in strips.

The soil of the prairies is clayey with wet subsoil, producing grass higher than the stock that feeds upon it. That of the woodland is a sandy loam, deeply covered with mould, which gives it surpassing fertility.

This covers an area of about one-third of the county, and where not cultivated is covered with a magnificent growth of hard timber, including black, red, post and water oaks, white and black hickory, cypress, pecan, elm, gum, maple and ash.

In product per acre this county ranks ninth, producing cotton, corn, oats, fruits, berries, vegetables, millet, clover, hay and potatoes, while its melons are unsurpassed.

The cotton district lies along the streams and produces from a bale to a bale and a half per acre. Corn and oats from forty to sixty bushels. The prairie land produces from three-fourths to a bale of cotton and from fifteen to forty bushels of corn. Oats from forty to sixty bushels, millet two to three tons.

Haying is one of the principal industries, while many farmers, realizing the profit to be derived from stockraising, have turned their attention entirely to that pursuit. The winters are so short that stock has to be fed only one or two months.

Arkansas County has 30,440 acres of school land and the annual school fund is nearly \$17,000. The county has no debt and scrip is at par, while taxes are low.

There are about forty churches, representing the various religious denominations.

The county supports three newspapers: *The Dispatch*, published at DeWitt, *The Chronicle*, and *Republican-Star*, published at Stuttgart.

DeWitt, the county seat, is in the south-central part of the county, at the terminus of the Grand Prairie Railroad. It has a \$14,000 courthouse, a fine graded public and high school, and two churches.

Stuttgart, the metropolis, is set like a beautiful picture on Grand Prairie, at the junction of three railroads. It has a brick and tile factory, with a capacity of 2,000,000 bricks yearly, a large sawmill and three lumber yards, three hotels, street cars, bank, school building and seven churches. Population about 1,500.

## PRAIRIE COUNTY.

Prairie County lies just north of Arkansas, and south of White. It is bounded on the east by Woodruff and Monroe, and on the west by Lonoke. It has an area of 710 square miles, and a population of 10,000.

The surface is slightly undulating and well watered by White River and its tributaries, and consists of prairie and heavily timbered woodland.

The prairie land is mostly south of a dividing line running east and west, and a large proportion is included in Grand Prairie, which extends out into adjoining counties. North of this dividing line, however, are found several small prairies noted for their fertility and productiveness.

The chief crops are cotton and corn, but the prairie lands are especially adapted to small grain, tame grasses, vegetables, especially tomatoes and early peas, strawberries, grapes, peaches and pears; while plums seem to do better here than anywhere else in the State. Apples do better in higher altitudes.

Here is a natural range for stock from March to December, and stock raising is rapidly coming into prominence, the prairies being divided into ranches and stocked with blooded stock.

The timber growth of this county includes a superabundance of red gum or satinwood, which, in some localities, will yield 30,000 feet of timber per acre. There is a quantity of hickory, some walnut, post, black and white oaks, ash, maple, elm, pecan, gum, etc.

The financial condition of the county is good, it having no bonded indebtedness.

White River affords shipping facilities for the entire eastern part, while the Little Rock & Memphis Railroad crosses from east to west, and the Cotton Belt crosses the southeastern corner.

There are public schools in nearly every neighborhood, while the principal towns have good buildings and fine schools.

There are three county papers, *Guidon*, published at Des Arc, *Prairie County Monitor*, published at Devall's Bluff, and *The Star*, at Hazen.

Des Arc, the county seat, on White River, annually ships from 5,000 to 6,000 bales of cotton.

Devall's Bluff is the seat of justice for the southern part of the county. It is located where the Little Rock & Memphis Railroad crosses White River. Its greatest enterprise is its boat oar factory, which employs 300 men and turns out 3,000 feet of finished oars a day.

Hazen, on the Little Rock & Memphis Railroad, is the commercial point. It ships, cotton, hay and fruits.

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## MONROE COUNTY.

Monroe, situated in White River Valley and traversed in its western limits by both White and Cache, has an area of 660 square miles. It is an eastern interior county, bounded north by Woodruff, east by St. Francis, Lee and Phillips, west by Prairie, and on the south-west separated by White River from Arkansas County.

The surface is generally level and heavily wooded. The bottom lands, sixty square miles in area, have dark sandy soils with substratum of clay at a depth of from two to three feet, very fertile, and when cultivated will yield from 1,200 to 1,500 pounds of seed cotton per acre.



Cotton is the chief staple, this county ranking eleventh in acreage and thirteenth in product per acre. Next in importance is corn, the yield being from forty to sixty bushels. Potatoes and turnips yield 300 bushels. Oats, from forty to sixty. Small fruits and berries, especially strawberries, do well here.

The raising of live stock is on the increase, and its advantages for this industry equal those of any other county, for, besides hay and mast, there are extensive canebrakes where stock may winter.

Improved farms can be purchased at from \$10 to \$50 per acre; unimproved, at from \$1 to \$15, while there are nearly 30,000 acres subject to donation to actual settlers.

The shipping facilities are superior to those of any other county in the State, unless it be Pulaski. Five railroads intersect each other with Brinkley and Clarendon for local points, while White and Cache Rivers afford an outlet for heavy products.

Monroe expends about \$12,000 a year on her schools, employing about sixty teachers. The various religious denominations are well represented, there being about forty congregations worshipping in the county.

Clarendon, the county seat, is situated on the east bank of White River, in the western part. It has a large stave factory, two cotton gins, a grist mill, three hotels, a school building and one newspaper, *The Sun*.

Brinkley, in the northern part of the county, is an important railroad center and manufacturing town. Here are the machine and car shops of the Batesville & Brinkley Railroad, the Brinkley Car and Manufacturing Works, Kniffen's Foundry, the Brinkley Oil Mill, two stave factories, the Union Wood Turning Works, the Monroe County Bank, two newspapers, *The Argus* and *Monroe County Mirror*, besides churches, hotels, meat markets, etc.

Only one-eighth of this county is under cultivation, and her vast forests are but waiting for the hand of the capitalist to change their solitude into the busy hum of the factory.

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## ST. FRANCIS COUNTY.

The southeastern corner of St. Francis comes within six miles of the Mississippi River, and it is bounded by Cross, Crittenden, Lee, Monroe and Woodruff.

Its area is 620 square miles, divided into three sections by St. Francis and L'Anguille Rivers, which cross from north to south. Each of these sections has distinctive topographical features. That east of St. Francis River is level and has the dark loamy alluvial soil of the Mississippi valley. Its supply of timber is practically inexhaustible, consisting of poplar, walnut, cypress, hickory, ash, elm, gum and oak. Where cultivated, it averages nearly a bale of cotton to the acre and sixty-five bushels of corn.

Between the St. Francis and L'Anguille is Crowley's Ridge, which is broken into hills, and has an altitude of 300 feet. The soil, somewhat alluvial, is not surpassed in fertility by any uplands in the State.

West of the L'Anguille, the surface is undulating with loamy soil, interspersed with clayey flats and prairie land.

Cotton and corn are the chief crops, but oats, wheat, rye, potatoes, turnips, peas, pumpkins, pears, cherries, apples, plums, peaches, quinces and grapes are extensively grown. Stock raising is a rapidly growing industry, the prairies in the west and the canebrakes in the east affording fine facilities. Jersey cattle do exceedingly well here.

The St. Louis, Iron Mountain & Southern Railway and the Little Rock & Memphis cross at right angles at Forrest City, while St. Francis River is always navigable for small boats.

There are forty common schools and numerous churches in the county.

Improved land can be bought from \$5 to \$40 per acre; unimproved from \$1 to \$12.

In many places the lands lying along the St. Francis are subject to overflow, while much has been reclaimed by levying and is the most productive in the county.

The county is practically out of debt, and taxes reasonably low.

Forrest City, the county seat, is admirably located, and has two brick yards, a canning factory, a distillery, large sawmills, a fine brick hotel, five churches and a bank.

Other small towns are Millbrook, Wheatley, Palestine and Madison.

The last named is a shipping point on the St. Francis and has large sawmills, and a stave factory.

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## LEE COUNTY.

Lee County is comparatively a new county, having been created by the Legislature of 1873. The territory of which it is composed was formerly parts of Phillips, Monroe, St. Francis and Crittenden Counties, the larger part being from Phillips. It contains 612 square miles of the most fertile lands of the State. Its shape is oblong, having a length of about 28 miles and a width of 18 miles, with Marianna, its county site, situated within a short distance of its geographical center.

Lee County has a population of 18,886, an increase over 1880 of 5,598, with a constant and uninterrupted increase. It is extremely gratifying that our population is being rapidly increased by men of industry, character and capital, who, from choice, seek our fertile lands and well regulated society, as a home for themselves and as a heritage for their children.

We have a further advantage in the easy access to the best markets, reaching Memphis, St. Louis and other markets in a few hours, thus putting our fruits upon the best markets before they are stale or crisp.

We have as well regulated system of common schools as can be found in any county in the State, nearly every school district voluntarily imposing a tax of five mills for school purposes. Every town, village and neighborhood in the county have their places of worship, where the story of the cross is statedly told.

No county perhaps in the State is so rich in valuable timbers as Lee. We have in abundance every variety of oak, poplar, hickory, ash, walnut, black, red and sweet gum. All of these timbers will soon become an important factor in the hands of increasing enterprise.

Our lands lie like a beautiful enchanting plain, and under provident and skillful culture will grow richer each succeeding year.

The society of Lee County is not surpassed in the State for culture and refinement; our lawyers are skilled in the contests of the forum; our physicians are educated as to the ills of the flesh; our ministers eloquent and fervent; our merchants distinguished for their solvency, enterprise and financial management; our farmers well advised as to the cultivation and management of soil and products. In a word, Lee County challenges any county in the State to show a combination of advantages equal to hers.

The health of Lee County will compare favorably with any county in the State, our death rate being less than other localities sought as health resorts.

In 1882 Lee County raised corn and cotton which sold for \$1,054,030, or more than one-half the entire assessed valuation of the real and personal property of the county.





MILLER COUNTY  
COURTHOUSE

TEXARKANA, ARK.

E. L. FRIEDEL,  
COUNTY JUDGE.

J. M. MONTGOMERY,  
J. W. BUCHANAN,  
COMMISSIONERS.

GIBB & BREYSACHER,  
ARCHTS.

LITTLE ROCK, ARK.



## SOUTHWEST ARKANSAS.

### HOWARD, SEVIER, POLK AND LITTLE RIVER COUNTIES.

BY HON. HAL. NORWOOD.

Among the many localities in the State of Arkansas affording inducements to home-seekers and men with money to invest, none surpass this section of the State, composed of Howard, Sevier, Polk and Little River Counties. These counties are located in the southwestern part of the State, the Indian Territory being the boundary line for three of them; the other lying to the east of Sevier County. The area and population are as follows: Howard County—area, 629 square miles; population, 13,789. Sevier County—area, 547 square miles; population, 10,072. Polk County—area, 935 square miles; population, 9,283. Little River County—area, 547 square miles; population, 8,903; making a total of 2,658 square miles, and 42,047 inhabitants. About fifteen per cent of the population is colored; the majority of them live in Little River County.

The northern half of this section is mountainous and hilly, but the soil is rich and produces well. The soil in the mountain valleys is as fertile and desirable for farming purposes as the valley along the Shenandoah in Virginia.

Not so much of the land in the northern portion is tenable as will be found further down on the Saline and Cossatot Rivers. in Sevier, Howard and Little River.

By reference to the "Land Map" of Arkansas, issued by the United States Bureau, it will be seen that five counties contain all the black lands in the State, and three of the five counties are in this section. The black lands are found in large tracts in Southern Sevier and Howard; most of it, however, is found on Red River in Little River County, being the same character of soils as the black prairie lands of Texas.

A very small per cent of the land in these counties is improved. Unimproved lands can be bought from fifty cents to \$10 per acre, and improved lands from \$5 to \$50 per acre, on easy terms. Any one desiring to purchase a home in this section, can find just what he wants, and is not required to pay cash, but will be allowed from one to five years to pay for it. Cotton, corn, oats, barley, wheat, rye, millet, alfalfa, sweet and Irish potatoes, sorghum, peas, turnips; and, in fact, all farm and garden products are grown here successfully. Cotton and corn being the principal crops, the average yield of the former is 750 pounds seed cotton to the acre, and 25 bushels of corn; but there is plenty of land that yields annually one and a half bales of cotton and 75 bushels of corn to the acre.

No great attention has been given to fruit growing yet, but has done well wherever tried. Polk County is as well adapted to fruit growing as any county in the State, and hundreds of bushels of apples are hauled in wagons from that county every year to Texarkana.



Grapes do well, and at present there are a number of fine vineyards near Nashville, in Howard County, and also a great many scattered throughout the other counties. Along the streams any amount of grapes grow wild; this being an evidence itself of the fertility of the soil. Whortleberries, blackberries raspberries, and dewberries are found abundantly, growing wild.

This section is rich in timber—almost all kinds being found here—such as walnut, ash, cherry, oak, beech, hickory, dogwood, maple, elm, gum, bois d'arc, cypress, sycamore and holly. Vast and extensive forests of pine yet untouched, which will make lumber one of the chief industries as soon as transportation is furnished. On Red River, in Little River County, are large groves of pecan trees that yield an abundant crop every season. The mountains of Polk County are covered with cedars growing wild.

In good, pure, cold water, this part of the State is not surpassed. Well water is found at an average depth of twenty feet. Besides good well water, Nature has supplied the northern portion of it with good springs that furnish water all the year round; and so numerous are the springs in Polk County, that most all the inhabitants use water from springs. Many of the springs are valuable for medicinal purposes; among them are the Chalybeate, White Sulphur and Black Sulphur Springs at Dallas, at Gilliam Springs and at Baker Springs. With a railroad through this part, it would only be a question of time until these springs would become famous as health resorts.

All kinds of stock do well here, especially cattle, the range being so fine and the winters so mild that the cattle make their own living on the cane and grass. Hogs require some attention in the summer, but get fat enough on acorns in the fall for pork. The people are improving their stock, especially horses; some fine stock farms in all of the counties.

The report of the recent Geological Survey shows that part of the State contains many valuable minerals, but at present only one mine in operation; that is the antimony mine. Antimony City is located in the northwestern portion of Howard County. The famous White Cliffs, on Little River, contain valuable limestone and chalk. At Rocky Comfort, in the western part of Little River County, is a bed of marl and marly limestone ninety feet in thickness. On the Saline River, in Sevier County, there is what is known as the "Old Salt Works," from which there was a large amount of excellent salt during the war. This could be worked now, and affords an opening for a good investment.

These counties contain a class of hard-working, sober, honest, generous people; no cross-road taverns, for every man's latch-string is on the outside for both friend and stranger. A number of towns are scattered throughout this section. The principal towns in Howard County are Nashville, Center Point (the county site) and Mineral Springs. In Sevier County, Lockesburg (the county site), Brownstown and Chapel Hill. In Little River, Richmond (the county site) Wilton, Ashdown and Rocky Comfort. In Polk County, Dallas (the county site), and Cove. In these towns, as in the country, is found an industrious, intelligent, honest, generous people. In the towns are found churches of various denominations, and every few miles in the country will be found good churches standing as monuments to the Christianity of the people.

High schools are found in the towns, and public schools are well supported in both the towns and country.

A person desiring a good farm, with good water, among good people, with good educational facilities, where a strict observance of both the civil and Divine law is the motto of all, this is the place. We invite you to come.



# SOUTH ARKANSAS.

## OUACHITA, COLUMBIA AND UNION COUNTIES.

BY HON. SAM. Q. SEVIER.

In the minds of many persons who are not familiar with Southern Arkansas, the impression prevails that the climatic influences here are deleterious to health, and that human life is burdened with many ills not to be heard of in other portions of our great and growing Union. The growth of this immediate section has been largely retarded by the above false impressions; and to allay such fears in those who contemplate coming to this State to live, is one of the prime objects of this article. The records of the census bureau, compiled in 1880, show that Union County, Arkansas, is one of the healthiest counties in the United States, it standing second on the list of healthful counties. One county in the State of Texas stands at the head of the list. Ouachita and Columbia Counties adjoin Union, Columbia on the west and Ouachita on the north; and the latter counties, while not quite up to the standard given Union County, yet both are considerably above the average in respect to healthfulness of inhabitants. While the Counties of Ouachita, Columbia and Union are well watered with beautiful streams, running into the Ouachita River on the east and into Red River on the west, the area of low, swampy, malarial district is quite small as compared with the total area within the boundary lines of each of said counties.

The area of Ouachita County is 900 square miles. Surface level or undulating. Alluvial soil.

Columbia County has an area of 900 square miles. The lands are mostly level, but high above overflows. The soil is alluvial and rich; such a thing as total failure of crops from any cause is unknown.

Union County has an area of about 1,100 square miles. It is one of the most beautiful and thoroughly drained counties in this country. The surface is level or undulating. The soil is rich and easily cultivated. The Counties of Ouachita, Columbia and Union have a combined population now of about 48,000 people.

There are comparatively few large planters; that is, such as you read about in accounts and novels descriptive of the South prior to the great war between the States. The climate of this section can be described truthfully in a few words. Our winters are short, beginning about the 20th of November and closing in February. Our springs are mostly pleasant in temperature, but moist; our greatest rainfall being from March 10th to May 10th. Our summers are not unusually lengthy nor oppressively warm. As a general rule the heat is more oppressive from June 15th to July 15th, but even during this period, cool Southern breezes are the rule and not the exception, the thermometer averaging from 80° to 90° in the shade during the warmest portions of the day.

The three counties herein named produce annually about 60,000 bales of cotton, which is the farmers' money crop, and at the prices obtained for the past two years, brings about \$40 per bale, or \$2,400,000 annually into circulation. The agriculturist is learning more and more every year the value of producing his own feed crops and as much of that which goes to keep the table supplied as possible. Corn, oats and hogs do well in this section,



and more attention is paid to raising same than in former years; notwithstanding, the home production does not yet supply the home demand. A large demand for the products of the hog, corn and oats is from sawmill employes, who constitute a large and growing element in our population. The lumber or sawmill interest in the three Counties of Ouachita, Columbia and Union are large and growing. The amount of money invested in lumber producing appliances, and in timber lands, exceeds in value the agricultural values. The value of the output of the lumbermen is, perhaps, nearly thrice as great as the amount realized from the sale of cotton. The St. Louis Southwestern (Cotton Belt) Railway extends through the Counties of Ouachita and Columbia, from northeast to southwest, and opened up vast tracts of virgin yellow pine forests which are now being worked by experienced mill men, mostly from Michigan and other Northwestern lumber districts. The St. Louis, Iron Mountain, Camden & Alexandria Branch extends through the Counties of Ouachita and Union, from north to south. These roads cross at Camden, the largest place in the territory described, and the recognized financial center of the entire surrounding country. Camden is at the head of navigation on the Ouachita River, and is a thriving city of about five thousand people. It will be treated in detail further on in this article.

Thirty-five large planing and lumber mills on the St. Louis Southwestern Railway (output nearly entirely yellow pine), within the Counties of Ouachita and Columbia, extending over about fifty-six miles—thirty-six miles in Ouachita County and twenty miles in Columbia—employ about seven thousand people. Some of these mills operate from ten to fifteen miles of regular railways and numbers of tramways for transporting logs from the forest to the mills. The output or cut of the mills averages about 30,000 feet, each mill, of merchantable lumber per day, or annual product of thirty-five mills of 315,000,000 feet of lumber, averaging in price \$10.50 per 1,000 feet, or grand total in money yearly of \$4,720,000, calculation based upon 300 working days in the year.

Thirteen mills on Camden & Alexandria Branch of the St. Louis, Iron Mountain & Southern Railway, in Ouachita and Union Counties, covering a line of forty-two miles, average number of employes 2,000. Yearly output, 65,000,000 feet of merchantable lumber, bringing in money about \$1,000,000 annually. The timber interest in Ouachita and Union, on the above road south of Camden, is in its infancy. The road is a new one south from Camden, and was thrown open for business of the 1st of July, 1892. It will be seen that the income from timber in the three counties alone, along the two railways, is nearly \$6,000,000 annually. The supply of timber is large and not yet fully covered by investors, nor the territory fully developed by railroad facilities. It is estimated by lumbermen that the supply of pine will last for fifteen years. The oak, hickory, ash, gum and other woods have scarcely been touched. The Oxley Stave Company put up a large stave plant at Camden last year and are now in full operation, turning out about 1,000 cars of white oak staves per year for export to France, Spain and Portugal. The Oxley Stave Company is one of the largest concerns of the kind in this country, and have invested largely in white oak timber in the three counties herein named.

The cause of education is progressing rapidly. The common or free schools are well supported in the country districts, and all the towns and villages take pride in maintaining full nine months' sessions within their respective limits. The schools for the two races are kept separate, both races being treated exactly alike in the matter of apportionment of the common school funds, although the white population, which predominate both in numbers and wealth, pays by far the greatest part of the school tax. The standard of education is

quite as good as that maintained in the older and more densely populated districts of the East and West. The rising generation will compare favorably in point of education and morals with the young people of other sections of the country. There is, perhaps, as little rowdyism and tippling in the three Counties of Ouachita, Columbia and Union as any three counties of the same number of inhabitants in the United States. Columbia and Union Counties are what are known as prohibition counties, no tippling shops being allowed within their respective boundaries. Ouachita County is a "wet" or whisky county, but whisky is sold in but two places in the county—that is, in the City of Camden and the incorporated town of Bearden—the local option laws keeping it out of other communities. Local option is one of the features of the Arkansas statutory laws, and any community can control the sale of spirituous liquors by simply a majority of its voters declaring against license. The laws are enforced and crime is not prevalent. The records of the criminal courts show juries can be depended upon to punish violators of the law. Crime in this section, as in almost all other sections of our country, is confined to the lower classes of the human family. There is no political crime or ostracism of record in any of our courts. Democrats and Republicans, Knights of Labor and Populists, all travel the same roads and vote at the same precincts without fighting or annoying each other. The counties are largely Democratic, however, and naturally so, because the Democratic party of the South is essentially the white man's party, and the white man always stays on top.

Lands are cheap. In fact, in the writer's opinion, land values are lower to-day in this section than anything else and much lower than they ought to be, when you take into consideration the immense amount of State and Federal Government lands which have within only a few years been taken off of the market, by entry and purchase, for timber purposes alone. Those who desire to invest in real estate, can do no better than come to this section. Peaches, apples, pears, apricots, plums, all grow here to perfection. Grapes, especially the Scuppernong, thrive here. This is the native place of the celebrated grape introduced into France by the name of "Ouachita Grape," from which our excellent champagne is produced.

The City of Camden is the county seat of Ouachita County. Population now, about 5,000; population in 1880, 1,500; in 1890, 3,200.

Camden has two banks, one a national bank and the other a State bank, both with \$50,000 paid up capital, and deposits running from \$120,000 to \$180,000 each. The business men of Camden are noted for their solvency. There has not been a failure of any importance in Camden for ten or fifteen years. This city is reported to be one of the wealthiest in point of actual cash to population in the State. Several individuals in Camden are worth from \$100,000 to \$250,000. The business portion of the city is well built, the houses nearly all being brick, two and three-stories high, with basements and elevators. The wholesale trade of the city is steadily growing. The courthouse is a beautiful building, costing the county about \$50,000. The building is in the center of a beautiful square, on an elevation overlooking the business portion of the city. The architecture is modern and the building is handsomely equipped with all modern conveniences throughout.

There is no gas plant here, but the city is beautifully lighted every night in the year by the best of arc electric lights. There is no portion of the city but that is well lighted. The water-works is another feature of the city. The water is taken direct from the river, above sewerage, and pumped into the city and through the city to stand pipe on Ft. Southerland, which is 130 feet above the level of the river bank. The city has an excellent sewerage system and connections therewith are required by the board of health.



The Hotel Ouachita is leading hostelry. It is a handsome three-story building, equipped throughout with modern appliances, electric lights, electric bells, water and sewer connections.

The opera house is an imposing three-story structure, on the corner of Adams and Jefferson Streets, 50 x 100 feet.

The Ouachita Valley Fair Association hold its meetings every year, at their beautiful grounds one mile south of the city, on the Cotton Belt route. The Fair is well attended; good stock, good exhibits and excellent racing, are always assured. The meetings are held annually, on the 4th Tuesday in October.

The schools of Camden are graded and well attended. Both white and black schools are maintained for nine months in the year.

The various Christian denominations are well represented, and there are churches in every ward in the city. The Jews have their synagogue and teacher, and form quite an element in social and business affairs, some of our largest business concerns being Jews.

Camden is located on the right bank of the Ouachita River, on a range of bluffs running up 100 to 120 feet above the water line in the river. Boats ply between this city and New Orleans regularly. The distance by river to New Orleans is 750 miles. Some of our steamers are elegant in their appointments, and cater to what is called the "coast passenger trade" between Camden and New Orleans. The compress for repacking cotton at Camden is one of the largest in the State. The ice plant here, owned by Hicks & Sons, has a daily output of twenty tons of ice, and supplies the local demand and many other places in this vicinity.

The United States Government has bought ground in Camden, on Washington Street, and have appropriated \$25,000 for the erection of a United States Government building. The building will be occupied by the United States land office and post office.

The clays and coals in vicinity of Camden are said to be another great source of wealth, and a large company is now forming to develop the same.

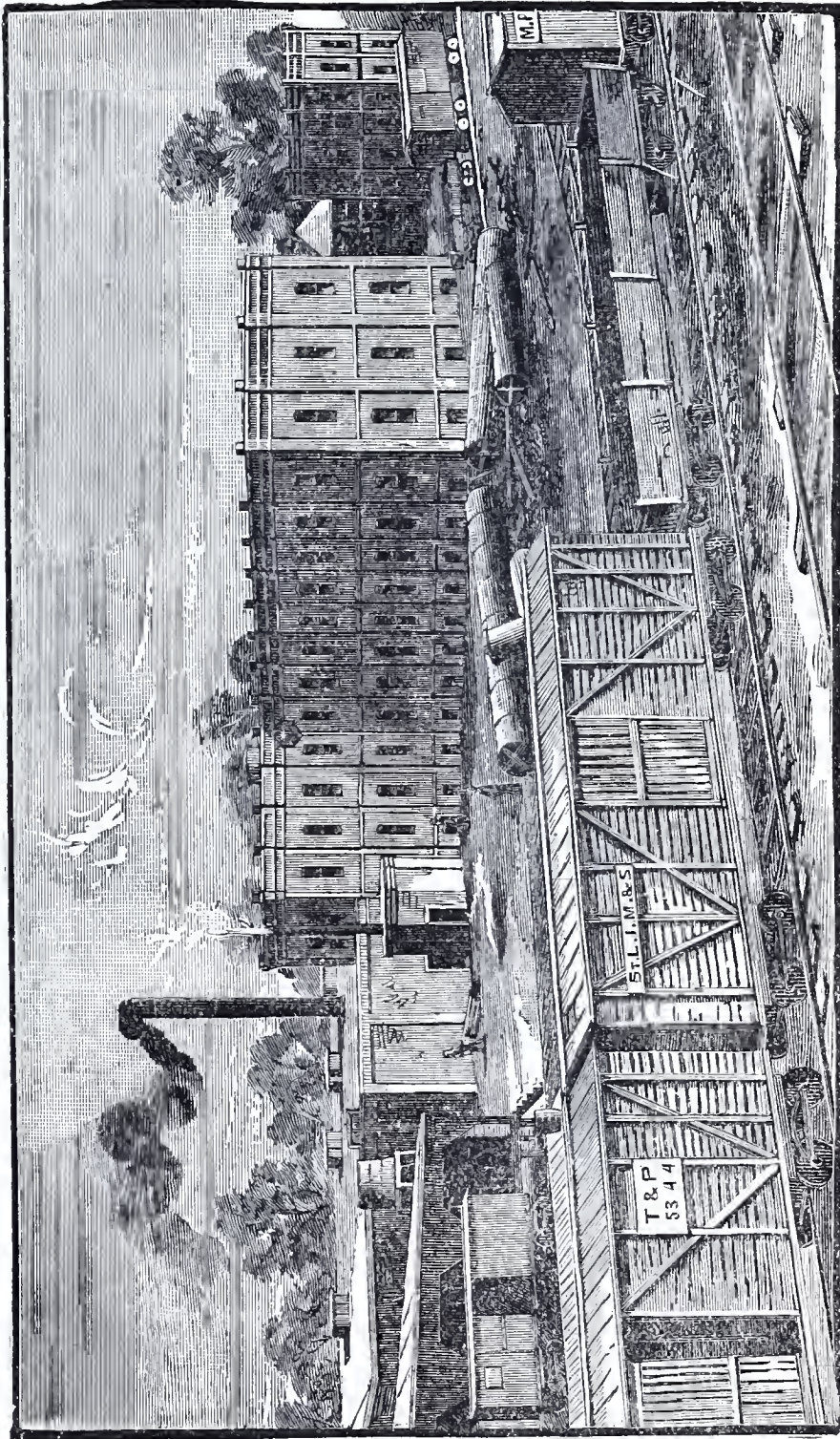
Stephens, Buena Vista, Bearden, Eagle Mills and Chidester are the principal towns in the county.

Magnolia is the county seat of Columbia County—population between 1,500 and 2,000 people. Magnolia is a progressive and enterprising town. She is noted for the beauty of her churches and the quality of her schools. She has the best of both. She makes no pretensions as a wholesale market, but endeavors to excel in social standing, although the merchants do a large and lucrative retail trade with surrounding planters.

El Dorado is the county town of Union County. Until recently this beautiful town had no railway facilities and therefore was comparatively dead, but last year the Camden & Alexandria Railway was extended to El Dorado, and the town has put on new clothes and is booming. Large interests are springing up all around her, and she bids fair to assume considerable prominence as a center of trade. Her people are enlightened, enterprising and progressive, and number some of the most prominent citizens of the State.

The above is a plain statement of facts, which can be substantiated by writing to any well informed person in the territory named.





OIL MILL AT TEXARKANA.



